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Class No......

Book No



HORIZON READERS

BEHIND THE RANGES

TALES OF EXPLORERS, PIONEERS
AND TRAVELLERS

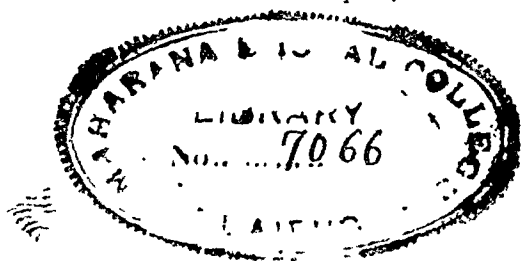
By

E. E. REYNOLDS

ILLUSTRATED BY S. TRESILIAN

Something hidden. Go and find it. Go and look behind the Ranges—
Something lost behind the Ranges. Lost and waiting for you. Go!

The Explorer, RUDYARD KIPLING



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I

Outwitting the Red Indians

IN the autumn of 1785 a boy of fifteen set off with two Indians to walk the hundred and fifty miles from Churchill to Fort York along the shores of Hudson Bay.

Such was David Thompson's first taste of exploration in Canada. Little more than a year before he had been walking the streets of London; now he was apprenticed to the famous Hudson Bay Company for seven years.

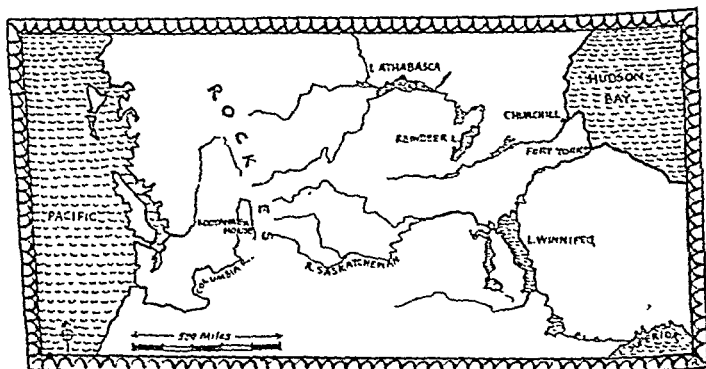
He made himself an expert surveyor and spent the rest of his life mapping Canada from Hudson Bay to the Pacific. He opened up new routes never before trodden by a white man. During those years of wandering he met with many adventures not only of Nature's making—mountain and rapid—but with the Indian tribes who still roamed at will over their ancient territories.

Thompson was able to get on good terms with most Red Indians, but there were times when his fate was in their hands, and then it was only by his coolness and daring that he came through.

We always think of the Red Indians as experts in all outdoor knowledge—in woodcraft, in tracking, and in the handling of their birchbark canoes. But some were by no means as skilled as legend makes them. Here is one incident, which shows that the white man

knew more about canoeing, for instance, than the Indians.

In June 1796 Thompson set out to explore the maze of rivers which lies between Reindeer Lake and Lake Athabasca. His only companions were two young Chepawyan Indians, one named Kozdaw and the other called Paddy because, as Thompson said, his real name was too much of a tongue-twister. Neither



was accustomed to canoe-work on a river full of rapids and falls. This was a serious handicap as they were to discover, for had they been expert canoeists Thompson would not have lost his trousers!

The three men were working their way up a river towards a twelve-foot fall. At times they had to take the canoe out of the water and carry it round some obstacle or particularly difficult part of the river. This is what is meant by a 'portage'. As they were constantly getting in and out of the water they had taken

off their trousers and put them in the canoe. They worked in their hunter's shirts of leather.

Thompson was in the canoe as they got nearer the fall, while the two Indians were towing at the end of a rope. They came to a birch tree growing at the edge of the water and so far out that there was no footing between it and the river. When they got to this spot the Indians stopped and had an argument as to which side of the tree they should take the rope. Had they been skilled canoeists they would not have hesitated for a moment.

Meantime Thompson's position became more and more dangerous. The strength of the current was swinging the canoe across the stream and it was likely to be overturned at any moment. He shouted at the Indians.

'Go on! Take the rope this side. Hurry up!'

But the noise of the rapids and the fall drowned his voice and the two men went on arguing with their backs turned to their leader's danger.

There was not a minute to lose; so he took out his knife and cut the rope. His hope was that he could somehow manage to steer the canoe and enter the rapids below bow-first instead of broadside-on. But his hope was defeated.

The fierce current took the canoe as if it were a branch of a tree and flung it down the rapids.

Thompson was pitched out and carried along under water. He struck with his feet on the bottom and when he came up he was in comparatively calm water quite close to the canoe, which was floating bottom up.



"The fierce current took the canoe as if it were a branch of a tree and flung it down the rapids. Thompson was pitched out."

He grasped the canoe and, as he was in shallow water, brought it to the shore. His alarmed companions ran along the beach to help him. All their possessions had been thrown out, including their trousers!

After some search amongst the rocks by the shore, they managed to rescue their small tent of grey cotton, the gun, and the box which contained the precious surveying instruments and maps.

They divided the tent into three and fashioned rough coverings of them to replace their trousers. Thompson discovered that his left foot was bleeding badly. The flesh had been torn away from heel to toe on the rocks. He bound up the wound with a bit of his share of the tent.

Their position was desperate; no food, no ammunition, almost naked, and in a wild and uninhabited part of the country. Thompson's foot gave him much trouble as he struggled over the rocky ground. The Indians were almost in despair.

They managed to make fire with the aid of the flint of the gun and the hunter's knife. But food was their greatest need.

One day they spotted an eagle's nest about sixteen feet up in a birch tree. The parent birds were not visible, so Kozdaw climbed up to see if the young were there. He found two young eagles, but no sooner was he there than the parent birds seemed to arrive out of nowhere and attacked him. The other two men drove them off with stones.

The eagles did not give much of a meal, but it was

something. And here Thompson learnt from the Indians. He ate fat as well as flesh, but the Indians ate the flesh and rubbed their bodies with the fat. He was very ill afterwards, and the Indians explained that the fat was always dangerous to eat but it was a useful protection against cold if rubbed into the skin—it had never occurred to them to advise the white man.

They became very weak and it was with great difficulty that they managed to keep going, but just when they were at their last gasp they fell in with two tents of Chepawyans, who fed them and gave them shoes and ammunition and an old kettle, but no trousers.

So they were able to find their way back to their base and make preparations for another expedition.

Thompson was a man of strict principles in his dealings with Indians, and as they found they could always trust him, he seldom had trouble. One of his laws was 'No spirits'. He knew how the drinking of spirits—especially the crude kind sold to Indians—ruined them. But sometimes he had to be ingenious in the methods he adopted for carrying out his own rule. His partners in the fur trade had no such scruples; they knew that better bargains would be obtained when the Indians had first been fuddled with liquor.

Here is one example of how Thompson got over this difficulty. His partners had insisted that he should take two kegs of spirits with him on one trading expedition in the mountains. He reluctantly agreed and set out.

At length they reached the mountain pass through which they had to travel. The path was narrow and had

steep and rugged rocks on either side of it, so that only one horse could get along at a time.

Thompson picked out the most vicious of his horses, and tied the two kegs of spirit one on either side of it. It was not long before the kegs were being bumped vigorously against the outjutting rocks. Soon they were both smashed and the spirit emptied itself out on the path.

This trick was so successful that Thompson's partners came to the conclusion that it was no good trying to make him sell spirits to the Indians, so from that time onwards he was able to keep to his rule.

For some years Thompson's work was in the east and north of Canada, but his great ambition was to get to the Rocky Mountains in the west, and to reach the Pacific. It was not until 1806 that he was able to set out for the west.

He now had to face a new difficulty—hostile Indians. So far he had had little or no trouble with the Indians of the plains; they had been glad to trade furs with him, for they found him honest and straightforward in his dealings. But the tribes which lived on the eastern slopes of the Rockies were a very different problem.

Like all mountain-bred people, they were tougher and more warlike than their fellows of the plains. One tribe in particular, the Peagans, were determined that no white man should settle in their territory or pass beyond the Rockies. For many years they had been successful.

At last an opportunity seemed to come. Thompson heard that the tribe had left their usual hunting

grounds and had moved towards the east and for a time the way was open. Thompson therefore got his party together and set off.

The route they took was just north of the United States Boundary. They followed the Saskatchewan River, crossed the Pass to the Columbia River and near what is now called Lake Windermere they built a strongly fortified trading post known as Kootanac House.

The site chosen was along the steep bank of the river; this protected them from sudden attack on that side. The other three sides were stockaded, with bastions at the corners. Heavy timber was used so that the place was bullet proof.

It must be remembered that at that time the Indians no longer made use of bows and arrows for fighting, but were accustomed to the use of firearms; indeed these and ammunition were the chief things bartered for furs. So that the white traders were in a way busily arming the very people who might prove dangerous as enemies.

Here Thompson settled down and hunted and explored for some months. Trading goods followed him and he made ready to get into touch with any Indians who would barter with him.

All the time he kept careful watch for Peagans. But he saw none for many months.

At last two Peagans came as if on a friendly visit. But Thompson knew what their arrival meant; they had been sent by their War Chief, Kootanac Appee, to spy out the land and to see how strongly fortified the trading post was.

He spoke plainly to them.

'You are come as spies,' he said, 'and intend to destroy us. But many of you will die before you do so. Go back to your Chief and tell him so.'

Then he boldly took them all over the place and showed them how strong the fortifications were.

So they left, and again for several months there was peace.

One occupation Thompson had in addition to his fur hunting and surveying; he made some beautiful panoramic sketches of the Rockies. These are still preserved and they show a wonderful accuracy of eye and hand.

He knew that sooner or later the Peagans would move, and when a band of forty arrived he was ready for them. They pitched their teepees close to the House and waited. Their plan apparently was to starve out the white men.

The garrison consisted of Thompson and six men; they had ten guns, plenty of ammunition, and sufficient dried provisions to last them for some time. Water they drew up at night from the river running below one of the walls.

For three weeks they were besieged. Then suddenly the Indians struck camp and disappeared. Thompson suspected this was a ruse, so he was careful not to go far from the House.

It was only in after years when he had made friends with the Peagans that he learnt the whole story. This first band of forty were under a minor Chief, who was instructed to take the House, kill the white men, but

on no account to lose any of his men. This latter order he found was impracticable, so he gave up the job and went back to the main tribe to report.

Again there was a pause. Then after a couple of weeks, two more Peagans visited the House. It was a repetition of what had happened before.

Once more Thompson took them all over the House and showed them how well it was protected. Then he decided to try another method of keeping the peace.

'Which way are you returning?' he asked.

They pointed to the north, and indicated that their Chief was one day's march off.

'Return then to your Chief with these presents.'

He gave them a generous parcel of tobacco, a fine pipe of red porphyry and an ornamented pipe stem.

What happened when the warriors got back was described to Thompson by the Chief himself.

The two Indians reported what they had seen, and put before the Chief the presents. The Chief eyed the tobacco longingly, for he had none. For a time he remained in silence. Then he spoke to the waiting warriors.

'You all know me, who I am, and what I am. I have attacked tents; my knife could cut through them, and our enemies had no defence against us, and I am ready to do so again, but to go and fight against logs of wood, that a bullet cannot get through, and with people we cannot see, is what I will not do; I go no further.'

With that he cut off a piece of tobacco, filled the pipe, and smoked. The war was off!

These are only a few incidents in the life of this almost-forgotten pioneer who did so much to explore Canada. His maps are his only monument, for he died in poverty at the age of eighty-seven and was buried in an unmarked grave.

It has been said that one reason for the neglect of his work lay in his own character. 'He never talked much, or boasted of his own exploits', and it was not until his note-books and maps were published more than fifty years after his death that Canada learnt what it owed to him.

II

Imprisoned in China

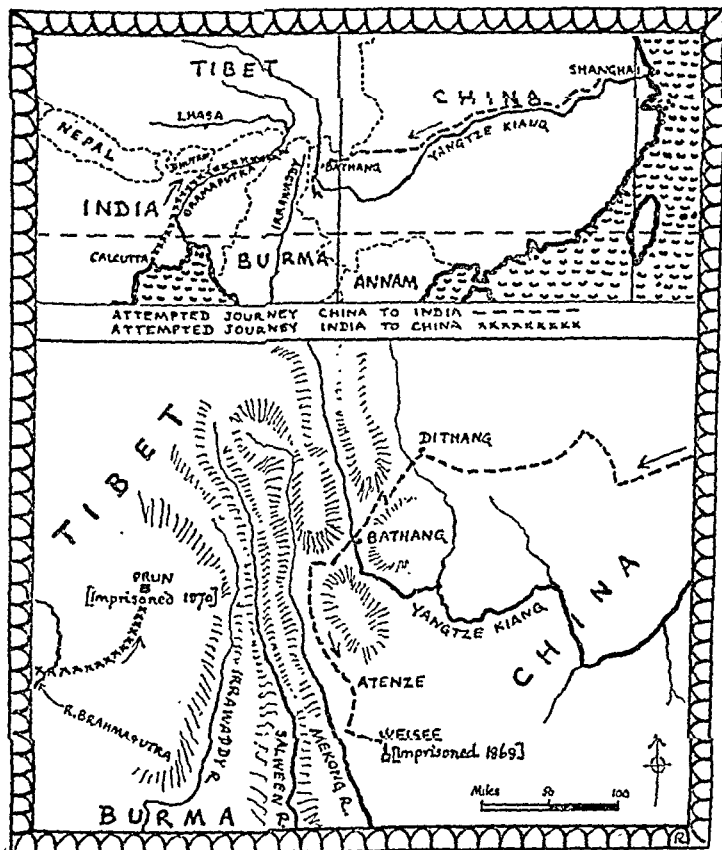
WHEN T. T. Cooper came to write an account of his adventures in China he called himself 'a pioneer of commerce'. That does not sound very romantic, but attempts to open up trade with remote regions have often led to strange adventures and even to sudden death, and as much courage and resourcefulness are required as by the explorer.

It was in the year 1867 that Cooper planned his expedition. He was then living at Shanghai, and he saw the advantages of opening up a route for trade between China and India, but there were many difficulties to be overcome.

A glance at the map will show you that if you follow along the River Yangtze-kiang from Shanghai westwards, you will come to a town named Bathang on the borders of that mysterious country Tibet. If you could cross over the gap between Bathang and the River Brahmaputra, you would be able to reach the Bay of Bengal. The two rivers indeed suggest a natural highway between Shanghai and Calcutta. A shorter gap leads to the Irrawaddy and so down to Burma.

Such were the facts that Cooper studied, and the more he thought about them the more firmly was he convinced that it was worth the risks involved to attempt to pioneer the route. The critical stage would be that gap between Bathang and the Brahmaputra.

At that time the borders of Tibet were overrun by lawless bands, and the Chinese Government had little



or no control over them. Indeed the central government exercised little authority over the outlying provinces; provided tribute was paid fairly regularly the

officials were left to manage affairs how they liked. A passport from Peking could not be relied on once the borders of Tibet were approached, and Cooper would have to depend on the goodwill of the mandarins; these members of the ruling class were distinguished by coloured buttons which indicated their exact rank.

The most dangerous part of his journey would be through Tibet. That country was then closed to all foreigners, and was almost unknown to Europeans; its natural barriers of lofty mountains helped to keep it isolated.

Even in China foreigners were not regarded with friendliness, and to avoid trouble Cooper decided to make the first part of his journey in native dress, and went so far as to have his head shaved and an artificial pigtail woven into his back hair.

A Chinese Christian, Philip, went with him as interpreter and companion, and he proved a most faithful servant under all the trials that they had to endure.

It is not necessary here to say much of the journey as far as Bathang; there were difficulties with some officials, and when it was realised that Cooper was a 'foreign devil' he had to put up with a certain amount of opposition, but his tact and the loyalty of Philip overcame all these troubles and they arrived at Bathang feeling confident that they would succeed in their plan.

Bathang was a town of 6000 inhabitants, and was an important market. Nearby was a famous Lamasery, or monastery for the Buddhist monks. These men were bitterly opposed to the presence of a foreigner and did all they could to stir up the people against Cooper.

He was allowed to ride to his hotel without trouble, but a great crowd gathered outside and cried out, 'Palin! Palin! Yang-kwai-tsu!' meaning, 'Englishman! Englishman! Foreign Devil!'

He was, however, cheered by receiving a visit from three French missionaries, who assured him that opposition would die down as soon as people knew that he was a trader. They proved to be correct, and on the day after his arrival Cooper was visited by the Second Mandarin, who proved friendly and promised all the help he could give for making his journey a success.

A few days later the First Mandarin arrived. He appeared anxious to help as the following part of his speech shows.

"I look into your face and my heart is glad; I must be your friend. To speak truly, I understand that the Lamas intend to stop you at Kyan-kha, four or five days' journey from this place; now if this happens the Viceroy at Chen-tu, myself and the Mandarin at Kyan-kha, will lose face (i.e. be disgraced). I have only heard that you are to be stopped. I do not know for certain; but I like Englishmen, and feel it my duty to help you. Perhaps you can be sent by a small road, an out-of-the-way path; if not, then you will have to return to Peking, but I hope the Lamas won't interfere."

This was serious news. If the Lamas, who were the most influential people in Tibet, made up their minds to stop Cooper, he would fail in his object. What alternative was there for him?

He studied his map, and came to the conclusion

that rather than give up his plan, he would strike south and try to reach one of the three rivers running down into Burma; from these he could easily get to India.

The First Mandarin proved right; the Lamas were determined that Cooper should not go through Tibet; he knew that it was no use going on in face of such a refusal; he would be murdered and Tibet would deny all knowledge of him, a lonely Englishman hundreds of miles from any other countryman.

An escort of two soldiers was provided when the changed plan had been explained, and Cooper with Philip and the soldiers set off.

Towards evening they reached a region made infamous by its bandits, and the escort began to tremble with fear. But there was no sign of robbers as they slowly climbed through the woods. Cooper went ahead with his gun handy. Presently he heard a shout from Philip who was coming behind with the baggage ponies. The escort had decided to return, but they had taken with them the store of provisions, and were now fast disappearing down hill.

To shoot at them would have meant certain trouble; so Cooper examined what was left. They had before them a journey of at least eight days to Atenze, the first important town down the valley leading to Burma, and all the supplies left to them were two packets of tea!

At the next village they tried to buy more provisions, but the Lamas had been before them, and all doors were closed; the whole district had been turned hostile and would supply no food.

Many a man would have given up at this, but

Cooper determined to go forward at all costs. At the next village the same treatment was given them; no food to be had at any price; nor could they get any forage for their horses which were reduced to skin and bones, for the country they travelled was bare of grass.

The two days without food, and the want of proper sleep, had weakened both men. They brewed some tea, and even gave some to the horses, which seemed to relish it. Cooper appealed to a Lama to save them from starvation, but all the answer he got was that they should not have come into that part of the country.

As they left the village, the inhabitants followed them and hurled stones at them. At length Cooper lost patience, turned in his saddle and fired his gun over their heads. This frightened their pursuers and they made off.

Slowly they continued their way, almost indifferent to what happened to them. They had not got far along the valley when a bullet struck the ground within a few feet of Cooper. Then followed a volley which fortunately did no harm. Looking up the hillside they could see a number of men near the mouth of a cave who were evidently getting ready to attack.

Cooper at once got off his horse, and told Philip to do the same; then they got between their two horses so that they had a living barricade. When the robbers had got to within a hundred yards of them, Cooper took steady aim and fired. He hit one of the men, and this so startled the others that they at once turned round and scuttled up the hill again. Then Cooper fired once more, this time hitting the rocks ahead of

the robbers. They stopped for a second or two, and then once more hurried away from this foreign devil who had such a fine gun and could use it so accurately.

It looked as though soon after this episode their luck had turned, for they came across some men in charge of a flock of sheep, and they were able to buy a lamb. With this they hurried on till they came to a road-side house. The woman admitted them, and even sold them two eggs. But things took a very different turn.

"I was sitting," writes Cooper, "patiently waiting for the eggs to boil, when suddenly I heard an agonising cry of 'Mr Copper! (for Philip could never say "Cooper") come quick, sir!' Rushing to the door, I saw Philip with bared arms, a knife in one hand, and holding on to the lamb with the other; while a stalwart Lama was trying to drag it away from him.

"On seeing me the Lama dropped his hold of the lamb, and commenced yelling at me in a frantic manner. Then numbers of men armed with long Tibetan knives seemed to spring from the ground, and a fellow suddenly pinioned my arms from behind. An elderly virago, of huge proportions, planted herself in front, and commenced a furious assault on me with a cudgel, aiming vigorous blows at my head, which I avoided only by moving my head from side to side, thus allowing the blows to fall upon my shoulders. The giant who held me almost made me frantic by yelling in my ears; and I was decidedly getting badly used, when Philip at last abandoned our precious lamb and came to my rescue. Having got my rifle he pointed it at my captor's head, causing him to let go his hold,



"Turning sharply round I stretched him on the ground by a well-planted blow on the nose."

when, turning sharply round, I stretched him on the ground by a well-planted blow on the nose."

This show of resistance seems to have settled the matter, for the attackers went off, taking with them, unfortunately, the lamb. Cooper and Philip waited no longer at such an inhospitable place, but, sore and dazed, they went on their way.

They met with better treatment at the next village, for there an old woman sold them some fodder for the horses, and also a little food for themselves; but here again they were not allowed to stop long enough for a good rest, but were hustled away by a hostile crowd.

They dragged themselves along almost in despair, but at long last relief came. They saw approaching them a long train of ponies with an armed escort. At first they thought of flight, but as that was beyond their physical powers, they just waited for what might come to them. By good fortune it happened that the convoy was in charge of two officers of the Mandarin of Bathang. They recognised Cooper and immediately offered their services.

A halt was called and a good meal prepared of rice and roast mutton and tea, "real flowery Pekoe, brewed expressly for me", as Cooper records. It is not difficult to imagine the feelings of the weary travellers at this sudden change of fortune.

Two days later they arrived at Atenze; they were able to get good lodgings, but the Mandarin proved unfriendly and hurried them away southwards.

Once again they passed into a region where they met nothing but hostility, but in spite of that they

pressed on until they reached Weisee. Bad news awaited them there; a tribal war had broken out between the local forces and the district south of the town, and this meant that any further progress towards Burma was cut off, unless they were prepared to risk the dangers of falling into the hands of marauding bands. Cooper was quite ready even for that, but after attempting to travel a few miles southward he reluctantly returned to Weisee.

He thought of waiting until things calmed down, but a few days convinced him that he must give up his project and set off back the way he had come from Shanghai. But when he had made up his mind to do the very thing the Lamas wanted him to do, he found himself a prisoner in the hands of the Mandarin.

This unscrupulous official had got Cooper into his power by a trick. He had sent a message inviting the Englishman to stay at his residence as it would be safer. Cooper believed in his good intentions, and accepted the invitation only to find that he and Philip were prisoners.

The truth was that the Mandarin had heard reports that the English traveller was carrying large sums of money with him, so he set to work to get some for himself. It was no use Cooper telling him that he had very little, just enough in fact to get him back to Bathang. Requests for 'loans' were followed by threats; but Cooper was determined that the truth should be known. He seized an occasion when the Mandarin was visiting him in the badly ventilated room to which he was closely confined, to show him

his possessions; they did not amount to much, but anyone could see that no large sums of gold were concealed. Even this had no effect. Then the two attempted an escape, but were caught before they had got very far. The position seemed hopeless. But once more officials of the Mandarin of Bathang who unexpectedly arrived came to the rescue.

They argued with the local Mandarin, who at first refused to do anything; he went so far as to suggest that Cooper should be 'quietly disposed of'. Yet he dared not defy the more powerful Bathang Mandarin. So eventually the release of the prisoners was granted, and after thirty-three days of close confinement they set off with their friends for Bathang.

There we can safely leave them, for the return journey to Shanghai was accomplished without serious danger.

Cooper was, however, a determined man; a month after returning to Shanghai, he set off with Philip for Calcutta by sea; he then tried to make the journey overland from India to China in the reverse direction. This time he got within 150 miles west of Bathang; he was again imprisoned and had to return. He has not left an account of that second attempt, but we cannot help but admire the way in which this pioneer of commerce followed out his ideas with grim determination in spite of many trials and dangers.

III

On the Road to Timbuktu

ON 2 December 1795 a young surgeon of twenty-four set out from the mouth of the Gambia River on the coast of West Africa to go to Timbuktu and to find the course of the River Niger.

We can imagine what elaborate preparations in these days would be made for such a journey; scientifically correct food would be hygienically packed; crowds of native porters would be engaged; ample medical supplies for all emergencies taken; guns and ammunition would be carefully chosen; there would be tents warranted to keep out every mosquito; camp furniture to satisfy all needs, and cooking gear to meet all requirements. It would indeed be an invading army.

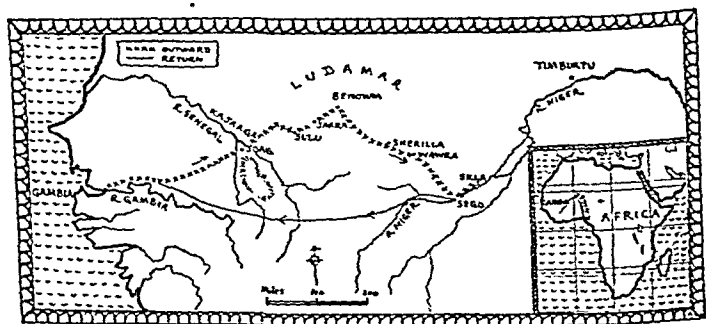
When this young Scotsman, Mungo Park, started off his total equipment consisted of food for two days, "two fowling pieces and pistols", a few beads for trade, some spare clothes, an umbrella, a sextant, a compass and a thermometer. His companions were a negro named Johnson, who had been a slave in America and was now interpreter, and a black boy called Demba. Their means of transport was a horse ("a small, but very hardy and spirited beast, which cost me to the value of £7. 10s.") and two donkeys.

Thus he faced the unknown interior of the Dark Continent. The one certain bit of information he had

to go upon was that shortly before a Major Houghton had tried the same journey, and had been murdered.

But as the next three years were to show, Mungo Park had an unusual amount of determination, and once he had set his mind on doing something, he would go through incredible hardships before giving up his purpose.

At that time Timbuktu was almost legendary; rumour said that it was a wealthy and wonderful city,



and the centre of a great trade. In actual fact it turned out to be a somewhat squalid town of no great importance. The search for the course of the River Niger was of far greater importance. That river enters the sea in the Gulf of Guinea flowing in a southerly direction; it was clear that if its course could be traced it would open up thousands of miles of country to trade. In 1795 little was known about the river except that it was of considerable size. The natives knew it as the Great Waters.

For the first three weeks of their journey all went well.

They were allowed to travel without hindrance, and in the villages where they passed the nights, they had no difficulty in getting food and shelter. Naturally some curiosity was shown by the natives in this strange white man who had not come to trade but was just looking at the country, and doing queer things with the instruments he carried.

The first sign of trouble came at Joag, a town in Kajaaga. During the night a number of soldiers arrived and asked if the white man had come. On being taken to his hut, they surrounded Park and told him that he had broken their laws by entering the country without permission, and they had orders to take him to the King. All his goods would be forfeited.

They helped themselves to whatever they liked from his baggage, and left him. All the following day he remained a prisoner without food, but towards evening, the nephew of the King of Kasson—a place farther east—arrived with another party of horsemen, and he invited Park to go with him, and promised his protection.

As this seemed the lesser of two evils, Park agreed, and they set off. But events showed that the King's nephew only wanted the rest of the white man's baggage, and Park was forced to part with nearly all that remained before he was allowed to go on his way.

He reached the town of Sulu almost destitute of goods, but he still had his horse, his two companions and his instruments. Throughout the journey he kept his notes in his hat as the safest place.



"They were particularly interested in the use of buttons as a method of fastening."

At Sulu he went to a slatee, or slave dealer, to whom he had an introduction and an order for the value of five slaves—that being almost the only currency available. After much haggling, the slatee gave him gold dust to the value of three slaves.

Once again the journey prospered, though every chief of a village expected some kind of present before he would allow the traveller to proceed.

He was now nearing a region where he expected trouble. It was dominated by the Moors, and as Mohammedans their natural cruelty was increased in dealing with a Christian. From Jarra, Park sent a request to the Chief of Ludamar, Ali by name, for permission to pass through his territory.

The reply was a party of horsemen who were ordered to conduct the white man to the Chief's camp at Benowm, as Fatima, the wife of Ali, was curious to see what he looked like.

This did not sound at all hopeful, but resistance would have been useless, so off they started. The journey itself was terrible. They crossed a desert region where there was no water. Park's escort laughed at his requests for water to quench his thirst; in fact he soon realised that he was a prisoner, and as a Christian was despised by them.

At length they reached Benowm where Ali had his camp. Park was at once taken to the Chief's tent. The attendants surrounded their captive and began to search him, and to examine his clothes. They were particularly interested in the use of buttons as a method of fastening. Then they became curious about the

whiteness of his skin, and compelled him to take off his coat and waistcoat so that they could make a closer inspection. He had to remove his stockings to show them his toes! All this he endured with as much patience as he could manage.

That night he was not allowed to lie down in a tent or hut, but had to remain out of doors. The next day he was given a hut, but he had no rest as everyone wanted to inspect him. By this time he was almost fainting for want of food and sleep, and towards evening he was given a little to eat. They tied a pig to his hut as a further insult, as Mohammedans do not touch pork.

"Never did any period", he wrote, "of my life pass away so heavily. From sunrise to sunset, was I obliged to suffer the insults of the rudest savages on earth."

He became ill through want of proper food and exposure, but his tormentors gave him no peace. Once he walked out of the camp and tried to get some sleep under a tree, but soldiers soon came along and ordered him back.

Park had arrived at Benowm on 12 March. It was not until 30 April that there was any change in his position. A neighbouring tribe declared war on Ali, and the camp was hurriedly shifted north. They pitched it again in a thick wood, and here Fatima joined her husband. Park was immediately taken to see her, and she proved rather kinder than her countrymen, and made better provision for him.

Towards the end of May Ali set off for Jarra and took Park with him. Fighting was going on amongst

the tribes in that region and this fully occupied Ali's interest. His last blow at his captive was to make a slave of the boy Demba. Park, at great risk to himself, tried to persuade Ali to let the boy go free, but at last he had to give up the attempt to soften the Moor's heart.

Now he bent all his mind to making plans for escape. On the return to Jarra his horse had been given back to him, and also his spare clothes. He discussed the idea with his servant Johnson, but the negro, although willing to help his master, refused to go with him on such a forlorn expedition.

By this time the Moors who were guarding Park were less strict, and it was on this that he put his hope.

Stealthily he put together a few things; spare clothes made up his bundle. He had no beads or any other means of buying food or help. Then one night Johnson came to whisper that the way was clear. Park stepped over the sleeping guards, got to his horse—mostly skin and bone by then—and set off *for the Niger*.

Nothing perhaps shows the man's unconquerable spirit more than his refusal to try to get back to the coast; he was looking for the Niger and he was going there alone without equipment of any kind. Nor was Timbuktu forgotten; he had made many enquiries about that city, but most of his informers had warned him not to go there.

So Mungo Park set off towards the east on what surely is the most foolhardy expedition any man has attempted.

He had to go cautiously, but that first night he was attacked by three Moorish robbers who took his cloak.

This was a serious loss, for it protected him from the rain and also served as a blanket at night. But indomitably he records, "I congratulated myself on having escaped with my life".

His plight soon became desperate; he suffered in the intense heat from thirst, and also from lack of food. Towards evening on his second day he climbed up a tree, but could see no sign of a village or hut. Once more he stumbled on, for by this time his horse was too weak to carry him. Then Park collapsed, and for some hours lay on the ground unconscious. But the cooler night breeze restored him, and he was able to move onwards.

Some flashes of lightning gave him hope that a storm would break and bring rain, and so give relief to man and beast. But the storm which came was of sand. For an hour it raged, but happily was followed by heavy rain. Park took off his clothes and let the blessed water drench his body. But though relieved of thirst, he had still to solve the food problem.

Somewhat refreshed, he went on, driving his horse before him, and at length reached a village called Sherilla. An old woman took pity on him and gave him a little food, and also some oats for his horse.

On the following day he was at last out of the desert region, and—better still—out of the lands which Ali controlled. At the first negro village he came to, named Wawra, he was well received, and revelled in the plentiful food and above all in the untroubled sleep he was allowed to have. The gift of a brass button from his clothes was all that anyone wanted.

From now on he had a good reception everywhere as he passed from village to village; some thought he was a pilgrim and gave him help of all kinds.

On 20 July he reached a small village, and there he was told that the next day he would see the Great Waters—the Niger. We can imagine the excitement with which he set off the following morning. This is his simple record of his great moment.

“Looking forwards, I saw with infinite pleasure the great object of my mission; the long sought for majestic Niger, glittering in the morning sun, and flowing slowly to the eastward. I hastened to the brink, and, having drunk the water, lifted up my fervent thanks in prayer, to the Great Ruler of all things, for having thus far crowned my endeavours with success.”

It was the first time that a European had reached the banks of that famous river; and he stood there alone, a beggar in the midst of Africa! He had made the important discovery that the river flowed *east* and not *south* as had always been assumed. Actually it makes a great curve before turning south.

He soon entered a town of some size, Sego, but there his good luck again deserted him, and no one would give him shelter or food. At length he went out of the town and sat under a tree while his wretched horse grazed. Hours passed, and it seemed as if the whole population was going to treat him like a leper. Then as dusk fell a native woman took pity on him, and led him to her hut and gave him food and shelter for the night.

The next day Park set off once more. Most men would have been content with having reached the

Niger after such appalling sufferings, but Park was made of sterner stuff, and he decided to follow the course of the river.

Danger came not only from Moors, but from wild beasts, and one encounter with a lion might have ended fatally. As he slowly rode along a forest path the guide with him cried out *Wara billi billi!* (a very big lion!). "To my great surprise," wrote Park, "I then perceived a large red lion, at a short distance from the bush, with his head couched between his fore paws. I expected he would instantly spring upon me, and instinctively pulled my feet from my stirrups to throw myself on the ground. But it is probable that the lion was not hungry; for he quietly suffered us to pass." It would be difficult to find the equal of this calm record of 'How I met a lion'.

It was shortly after this encounter that Park's horse became too weak to go farther, and the master himself was not in much better physical condition. "But though I was little able to walk," he wrote, "my horse was still less able to carry me; and about six miles to the east of Modiboo, in crossing some rough clayey ground, he fell; and the united strength of the guide and myself could not place him again on his legs. I sat down for some time, beside this worn-out associate of my adventures; but finding him still unable to rise, I took off the saddle and bridle, and placed a quantity of grass before him."

So master and horse parted, but—such was Park's good fortune—to be reunited on the return journey when the beast had recovered.

He did another stage of his Niger journey by boat with a friendly fisherman, and at length reached Silla. Here he took stock of his position.

"Worn down by sickness, exhausted with hunger and fatigue, half naked, and without any article of value by which I might get provisions, clothes, or lodging, I began to reflect seriously on my situation."

So wrote this extraordinary traveller after a journey which would have long before turned back a hardened explorer. "I hope", he added, "my readers will acknowledge that I did right in going no farther."

In this apologetic manner he turned his face towards the coast and the journey of some 1600 miles which lay before him.

There is not space here to record the perils which he had to face and which he overcame. His own account in his book, *Travels in the Interior of Africa*, should be read to understand how much he endured.

On 10 June 1797 he reached the farthest English trading station, and there he was received as one who had risen from the dead. All hope of his return had long been given up. "I lost no time in resuming the English dress; and disrobing my chin of its venerable incumbrance", he records in his quaint way.

Even then his adventures were not at an end. As no ship sailing for England was available he went on the *Charleston* bound for America. Three weeks out this ship sprang a leak and it looked as though he had escaped the dangers of Africa to be drowned in mid-Atlantic. All hands were kept at the pumps day and

night, and the ship limped into Antigua in the Leeward Islands. There Park caught a mail ship and landed at Falmouth three years after he had left England.

In 1805 Mungo Park set off on a second expedition to the Niger and Timbuktu. This time he had a large party with him and much more efficient equipment. But the expedition ended in tragedy. They reached the port of Timbuktu on the Niger but were unable through weakness and threatened attack from the Moors to go farther. On the return the boats were overturned at the Rapids of Busa and Mungo Park was drowned.

Details of the tragedy were not gathered until some years afterwards from some natives, but Mrs. Park would never believe that her husband was dead, and in 1827 their second son, Thomas Park, set out to search for him, but from the day he landed in Africa nothing further was heard of him.

So perished father and son in their attempts to penetrate Darkest Africa.

IV

A Desperate Venture

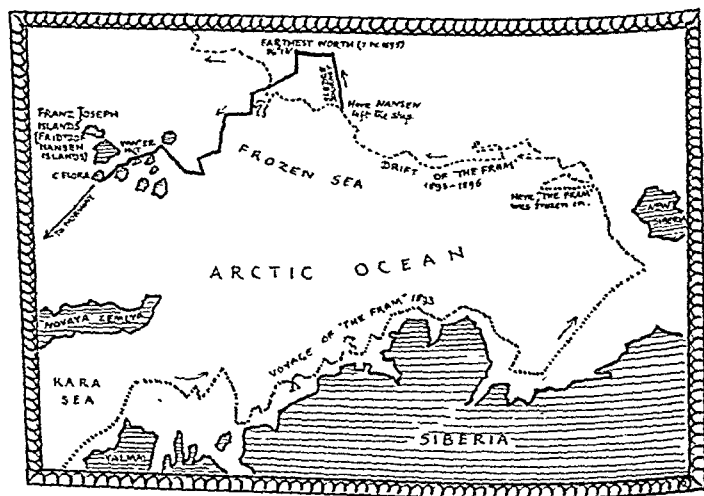
If you were asked 'What is the most courageous bit of exploration you know about?' I wonder what you would choose. I should hesitate between two expeditions: the voyage of Leif Ericsson from Iceland to America in the eleventh century—in an eighty-foot ship without compass—and Nansen's sledge journey 'farthest north'.

It was on 7 April 1895 that Nansen with his companion Johansen got 160 miles nearer the North Pole than any other previous explorers. Bear in mind what that date means; it was four years before Marconi sent his first message across the English Channel, and eight years before the Wright brothers made their first successful flight of 260 yards.

When Nansen left his ship the *Fram* to go on that dash to the Pole he knew quite well that it was a desperate venture. He could not possibly join the ship again; his one hope was somehow to reach Spitzbergen or Franz Joseph Islands and be lucky enough to get into touch with a ship.

The sledge journey proved more difficult than he had expected. There was no smooth surface over which they could sledge in comfort, but a mass of great hummocks of ice, many of them of great size, and getting dogs and sledges over them or round them delayed their progress considerably.

It was a marvel that they got as far north as they did. But at length they were compelled to turn back. The return was a more arduous task than the outward journey. It took them so long that they had to winter in the Arctic darkness.



They made a hut of stones and walrus skins. In that they spent ten months. Their main food was bear-meat, which kept them in good health but fattened them up so that they could hardly recognise themselves. It was a dreary time for they had little to do; their only book was an old nautical almanac and the interest of that was soon exhausted. They made what preparations they could for the spring journey to which they eagerly looked forward.

On the journey south they had had many hair-breadth escapes from dangerous accidents which might easily have proved fatal.

Here is one such tight corner during the time when they still had a few dogs left.

Polar bears were a frequent cause of trouble, though their presence made it possible for the two men to live—a very different business from Antarctic exploration when no animals can be shot for food.

They had set off on 5 August 1895 in their usual order. Nansen went ahead with his sledge and dogs and Johansen followed. At times they came to lanes of water in the ice over which they had to use their kayaks. Ferrying the gear and the dogs in those slight canoes called for great patience and skilful handling.

On this particular day the surface was worse than usual. It was, said Nansen, as if some giant had hurled great blocks of ice all over the place, and then filled the hollows with wet snow.

They struggled on. At length they reached a lane of water, and Nansen got ready to ferry across. Just as he was drawing his sledge to the edge he heard a scuffle behind him.

'Get the gun!' came Johansen's cry.

Nansen turned at the shout and saw to his horror that Johansen was flat on his back with an enormous bear standing over him.

Now the gun was in its case in the kayak which at that moment slid into the water.

Nansen managed to get a grip of the side and pulled with all his might to get the kayak up again.



"Nansen turned at the shout and saw to his horror that Johansen was flat on his back with an enormous bear standing over him."

'Hurry up if you want to be in time', shouted Johansen. His leader needed no urging, and he managed to get the heavily loaded kayak on to the ice. Another minute and he had his gun out.

He turned and cocked the shot-barrel. The bear was about two yards off watching him.

Nansen took aim and fired. His shot hit the bear behind the ear and it fell dead. Johansen was saved.

Then he explained what had happened. The bear had evidently been following them for some time, and had slunk from hummock to hummock without being seen. When Johansen was busy getting his kayak ready to follow Nansen, the bear had crept up behind him, and had given him such a cuff on the ear that he was soon on his back. It was then that he had shouted for help.

While Nansen was getting his gun, Johansen defended himself as best he could with his fists. Fortunately the bear became interested in what the other man was doing, and had also turned aside to cuff one of the dogs which got within reach.

The only damage was that one dog had a scratched nose, and the bear had scraped off some of the accumulated dirt and grease from Johansen's face, leaving a long white mark.

The bear had been followed at a distance by its two cubs, but when the men went after them, they scuttled off. They followed at a distance growling.

This was by no means their only adventure with a mother bear and her cubs. Here is an exciting in-

cident which began with walrus hunting and ended with bear hunting.

They had reached land in the Franz Joseph Islands and had decided to winter there. It was getting late in the year and they were on the look-out for walruses, for Nansen thought their skins would prove useful in roofing the hut they would have to make. For the time being they had made a rough shelter.

Presently they saw some way ahead a number of these huge beasts lying on the edge of the ice. They were asleep, so the two men got out of the kayaks on to the ice and stole cautiously forward. There was no difficulty about the shooting and soon they had two dead walruses to deal with—not a small job!

They set to work to get them skinned and cut up. While they were busy in this way the wind rose rapidly and soon a storm was threatening.

Nansen saw at once a fresh danger; the stretch of ice they were on was weakening and a crack was already showing. If this increased they would be separated from the mainland and float away on a melting island.

Quickly they took what flesh and skin they could and put them on the kayaks. It was heavy going against the strong wind. The sea was choppy but gradually they drew near to the shore, and at length got to their camping place.

They were glad to get into their sleeping-bag, but Nansen had not been asleep long before Johansen woke him to say that there was a bear prowling about.

Nansen listened. He could hear a low grunting just

outside their rough shelter. He seized his gun and crept out.

A she-bear with two large cubs was moving away. He fired and she dropped dead in a pool of water. The two cubs ran on and rushed into the sea and swam out. They reached a piece of ice and clambered on to it.

There was not much room for the two of them, but there they sat balancing and dipping up and down in the waves. Every now and again one would slip off, and then climb back again.

They cried out from time to time and kept looking towards the shore for their mother. The wind was still fairly strong and the lump of ice they were on was slowly being driven out to sea.

Gradually they grew smaller and smaller as they floated away.

When the two explorers went to look round they found that much damage had been done. All the walrus flesh they had had so much trouble to get back was mangled and thrown about the shore; all fat and blubber had been eaten. One kayak had been tossed up on to the stones, the other was half in the water.

It was lucky that Johansen had heard the bears about, otherwise even more damage might have been done.

It was near that spot that they set to work to construct some kind of a hut. With boulders, and one or two pieces of drift wood, they managed to construct walls, and they used the walrus skins as roofing.

For ten months they lived in that small hut. Until the light finally faded they spent their time bear hunt-

ing in order to get a good supply of food. The Arctic is a splendid refrigerator.

It was not until the middle of May 1896 that they were once more able to set off on their return to civilisation—if they could find it!

They were in good spirits, for in taking stock of their possessions they found that they had plenty of ammunition and so could, if necessary, spend another winter in the Arctic. Not that they wanted to do so, for one thing a diet of bear-meat gets monotonous, but it was good to feel that they need not worry about the future.

There was much open water round the islands and so they were saved some hard work at a time when they had not fully recovered from the weakness resulting from their lack of exercise.

They lashed the two kayaks together, and erected a sail, and then felt that they were travelling in luxury.

But before the first month was over, an incident happened which all but proved fatal, but it also proved that Nansen could keep his head in an emergency.

They had paddled their double kayak to the edge of the ice, partly to stretch their legs after sitting in a cramped position for some hours and partly to climb a hummock and get a view of the route which lay in front of them.

The first problem was to moor their kayaks securely.

'Use the halyard of my sail', suggested Johansen.

'But will it hold?' asked Nansen.

'It's stood a good deal of wind, so it should be strong enough.'

So Nansen struck a ski-staff into the ice and fixed the halyard round it.

For a time they walked up and down getting up their circulation, then they climbed the hummock to see what was ahead.

Just as they were turning to come down, Johansen shouted out, 'The kayaks are adrift!'

They had slipped the painter and were rapidly being carried away by the wind and current.

There was no time to lose. In those kayaks were all their possessions. They had not even a knife with them. To lose the frail craft meant to lose all.

Nansen acted at once.

'Here, take my watch!' he said to Johansen as they ran down to the ice edge. He took off some of his clothes and then leapt into the ice-cold water. It showed presence of mind to think of that watch, for if it once stopped they would be unable to work out their position.

The kayaks were already some distance off and moving quickly.

Afterwards Nansen said that he reasoned with himself in this way: 'If we lose the kayaks, it is the end; if I get cramp or get numbed with cold, that also will be the end; so it's all or nothing.'

Johansen could give no help. There was no use in his swimming out as well, for if Nansen succeeded he would need attention and warmth at once. To him it was the worst moment of the whole journey.

Nansen was a strong swimmer, but the cold was getting at him. At times he swam on his back to ease

the strain. Slowly he was getting nearer and nearer the kayaks.

Then another anxiety rose in his mind. Would he have enough energy to get on board, for he certainly could not swim back again?

At last he stretched out his arm and grasped the kayaks.

For a moment he thought that was the end, for he felt exhausted by his amazing effort.

But pulling all his energy together, he managed to get one leg over the side and tumbled in. For a minute or two he lay there to recover his strength. But he soon realised that he must not wait long for he was losing all feeling in his numbed limbs.

Painfully he paddled the awkward vessel back to the waiting Johansen. When Nansen landed all he could say was, 'So cold! So cold!'

Johansen acted promptly. He helped Nansen off with his wet clothes; put his own dry ones on him, got him into his sleeping-bag, piled the other on top with the sail and other gear, and then set to work to get a meal.

For some time Nansen lay and shivered violently, but at last he fell asleep, and when he woke he seemed none the worse for his adventure.

Two days later came the incident which proved happily to be the last danger of the expedition.

Walruses were the trouble this time. The kayaks had now been unlashed and Nansen was ahead when suddenly a walrus rose out of the water near him. He stopped paddling in the hope that the animal would

pass by, but it shot out alongside, threw itself on the edge of the kayak and aimed a blow with its tusks.

Nansen hit at it with the paddle; the walrus tilted up the kayak until it was half under water, and then the beast disappeared as quickly as it had arrived.

But it had seriously damaged the kayak, and presently the water was coming in fast. Nansen paddled frantically to reach the ice edge and just got there before the kayak sank.

All his possessions were soaked, but as he said, 'It might have been worse. I might easily have been wounded with that tusk of his.'

On 17 June they woke in camp and got ready for another day's journeying. Just as they were setting out Nansen thought he heard the noise of dogs barking. The two men stood and listened to what seemed an unbelievable sound. But again it came. Dogs!

Nansen went forward and from the top of a ridge he could just make out the figure of a man and some dogs.

He shouted with all his might and waved his hat. The strange figure waved back. Presently the two met.

The stranger was F. G. Jackson, the leader of an English expedition which had its base-hut on the shores of that island.

So by happy chance the two daring explorers reached safety.

On 12 August 1896 Nansen and Johansen landed in Norway; eight days later the *Fram* also arrived, and after a separation of fifteen months the whole party was reunited.

V

Fire at Sea

MEN have ventured into strange parts of the world not only to add details to the map, but to increase our knowledge of animal and plant life. Many beautiful flowers that flourish in this country were originally brought from out-of-the-way places by naturalists who risked their lives for the sake of finding something rare or unknown. When you see, for instance, the magnificent blooms of the rhododendron, you should remind yourself that its ancestor may have grown in the wilder parts of India, of Tibet, or of China. The Latin name may tell us which naturalist discovered the plant and introduced it into our country. Thus *Rhododendron Wardii* tells us that a naturalist named Ward first found the plant. Often the story of its discovery is as exciting and as full of adventure as any voyage of exploration.

One naturalist who went far afield in search of plants, birds and insects, was Alfred Russel Wallace. His first venture was to the Amazon in the year 1848. Not very much was known at that time about the greatest river in the world which flows almost across South America just below the Equator for over 3000 miles. The word 'Amazon' means 'boat destroyer', and that indicates what men thought of the river.

The climate is not healthy for Europeans, and in the steaming heat vegetation grows at a fantastic rate.

But it is the home of many strange plants and creatures, and for that reason Wallace chose the Amazon for his explorations.

He lived in Indian villages, and travelled on the river and its tributaries in the native canoes. Much of his journeying was done under very unpleasant conditions. Here is one glimpse of the kind of thing he had to endure.

"We could only get along by pulling the bushes and creepers and tree-branches which line the margin of the river. The next day we cut long hooked poles, by which we could pull and push ourselves along at all difficult points with more advantage. Sometimes, for miles together, we had to proceed thus, getting the canoe filled and ourselves covered, with stinging and biting ants of fifty different species, each producing its own peculiar effect, from a gentle tickle to an acute sting; and which, getting entangled in our hair and beards, and creeping over all parts of our bodies under our clothes, were not the most agreeable companions. Sometimes, too, we would encounter swarms of wasps, whose nests were concealed among the leaves, and who always make a most furious attack upon intruders. Nor were these the only inconveniences; it is only at some rocky point which still keeps above water that a fire can be made; and as these are few and far between we frequently had to pass a whole day on flour and water, with a piece of cold fish."

He had to live on strange foods, and never seems to have hesitated about trying the queerest meals. Alligator, for instance, he found good particularly when

young; turtles were another source of food, and monkeys were not despised. As one reads the account of his journeyings, one is more and more surprised that he ever returned to England alive after sampling such a variety of foods.

His travels were not all by water; at times he penetrated into the forest. This was by no means a pleasant experience, as the thickness of the undergrowth, the great thorns, and the risks of snakes and other wild creatures, made the journey a constant anxiety.

Once he got farther inland from the river to a mountainous region which had difficulties of its own. This is his description of how he and some of the Indians nearly lost themselves.

"We descended deep chasms in the rocks, climbed up steep precipices, descended again and again, and passed through caverns with huge masses of rocks piled above our heads. Still we seemed not to get out of the mountain, but fresh ridges rose before us, and more fearful fissures were to be passed. We toiled on, now climbing by roots and creepers up perpendicular walls, now creeping along a narrow ledge, with a yawning chasm on each side of us. I could not have imagined such rocks to exist. My gun was a most inconvenient load when climbing up these steep and slippery places, and I did it much damage by striking its muzzle against the hard granite rock. At length we appeared to have got into the very heart of the mountain: no outlet was visible, and through the dense forest and matted underwood we could only see an interminable succession of ridges, and chasms, and gigantic blocks

of stone. As it was evident the boys had lost their way, I resolved to turn back. It was a weary task. After about an hour's hard work we got back to the place whence we had started, and found the rest of the party expecting us."

They spent that night in a cave—one of many with which the mountain was riddled—and Wallace gives a vivid picture of the camp-fire scene. "The fires were made up, the pork put to smoke over them, and around me were thirteen naked Indians, talking in unknown tongues. Two only could speak a little Portuguese, and with them I conversed, answering their various questions about where iron came from, and how calico was made, and if paper grew in my country; and they were greatly astonished to hear that all were white men there, and could not imagine how white men could work, or how there could be a country without forest. They would ask strange questions about where the wind came from, and the rain, and how the sun and moon got back to their places again after disappearing from us; and when I had tried to satisfy them on these points, they would tell me forest tales of jaguars and pumas, and of the fierce wild hogs, and of the dreadful curupuri, the demon of the woods, and of the wild man with a long tail, found far in the centre of the forest."

One of the problems a naturalist has to face is that of preserving the specimens of animal and plant life he secures. Nowadays he would be able to get all kinds of tins and cases specially prepared for the purpose, but Wallace had to improvise everything. Moreover, he had to work quickly, because in the intense heat

specimens were soon spoilt; then everywhere was a plague of insects which settled on him as well as on the object he might be skinning. He sent off boxes and casks of things to the coast whenever he had an opportunity, but many of these got lost or ruined.

Fortunately a small selection was already on its way to England before he himself took ship from Para in July 1852; otherwise all would have been lost in the catastrophe which three weeks later overtook the ship. Having escaped from the dangers of the Amazon, Wallace all but perished at sea.

The ship was the *Helen*, of 235 tons, with a cargo chiefly of rubber. Her captain was John Turner. Wallace's main collections were carefully stowed away, and he had with him his records and notes of four years' observations. He himself was far from well as he was suffering from fever, and sea-sickness added to his discomfort. The story of what happened can best be told in his own words. It begins on the morning of 6 August, when fire broke out.

"We found a dense vapoury smoke issuing from the forecabin. The fore hatchway was immediately opened, and, the smoke issuing from there also, the men were set to work clearing out part of the cargo. After throwing out some quantity without any symptom of approaching the seat of the fire, we opened the after hatchway; and here the smoke was much more dense, and in a very short time became so suffocating that the men could not stay in the hold to throw out more cargo, so they were set to work pouring in water, while others proceeded to the cabin, and found abundance

of smoke issuing from the lazaretto (the place where the food was kept under the cabin), whence it entered through the joints of the bulkhead which separated it from the hold. Attempts were now made to break this bulkhead down; but the planks were so thick and the smoke so unbearable that it could not be effected, as no man could remain in the lazaretto to make more than a couple of blows.

"Seeing that there was now little chance of our being able to extinguish the fire, the Captain thought it prudent to secure our own safety, and called all hands to get out the boats, and such necessities as we should want. The long-boat was stowed on deck, and of course required some time to get it afloat. The gig was hung on davits on the quarter, and was easily let down. All now were in great activity. Many little necessities had to be hunted up from their hiding-places. The cook was sent for corks to plug the holes in the bottoms of the boats. Now no one knew where a rudder had been put away; now the thowl-pins were missing. The oars had to be searched for, and spars to serve as masts, with sails, spare canvas, cordage, etc. The Captain was looking after his chronometer, sextant, barometer, charts, compasses, and books of navigation; the seamen were getting their clothes into huge canvas bags; all were lugging about pilot-coats, blankets south-westerns, and oil-skin coats and trousers; and I went down into the cabin, now suffocatingly hot and full of smoke, to see what was worth saving. I got my watch and a small tin box containing some shirts and a couple of old note-books, with some drawings of



"We now lay astern of the ship watching the progress of the fire."

plants and animals, and scrambled up with them on deck.

"On deck the crew were still busy at the boats; two barrels of bread were got in, a lot of raw pork, some ham and cases of preserved meats, some wine and a large cask for water. The cask had to be lowered into the boat empty, for fear of any accident, and after being securely fixed in its place, filled with buckets from those on board.

"The boats, having been so long drying in a tropical sun, were very leaky, and were now half full of water, and books, coats, blankets, shoes, pork and cheese, in a confused mass were soaking in them. It was necessary to put two men in each to bale. In less than half an hour the fire burst through the cabin-floor into the berths, and soon flamed up through the skylight. There was now a scorching heat on the quarter deck, and we saw that all hope was over. The Captain at length ordered all into the boats, and was himself the last to leave. I had to get down over the stern by a rope into the boat, rising and falling and swaying about with the swell of the ocean; and, being rather weak, rubbed the skin considerably off my fingers, and tumbled in among the miscellaneous articles already soaking there in the greatest confusion. One sailor was baling with a bucket, and another with a mug; but the water not seeming to diminish, I set to work to help them, and soon found the salt water producing a most intense smarting and burning in my scarified fingers.

"We now lay astern of the ship, to which we were moored, watching the progress of the fire. The flames very soon caught the shrouds and sails, making a most

magnificent conflagration up to the very peak, for the royals were set at the time. Soon after the fore rigging and sails also burnt, and flames were seen issuing from the fore hatchway, showing how rapidly the fire was spreading. The vessel having now no sails to steady her, rolled heavily, and the masts, no longer supported by the shrouds, bent and creaked, threatening to go over-board every minute. The mainmast went first, breaking off about twenty feet above the deck; but the foremast stood for a long time, at last, being partly burned at the bottom, it went over, more than an hour after its companion.

“Night was now coming on. The whole deck was a mass of fire, giving out an intense heat. We determined to stay by the vessel all night, as the light would attract any ship passing within a considerable distance of us. We had eaten nothing since the morning, and had had plenty to do and to think of, to prevent our being hungry; but now, as the evening air began to get cool and pleasant, we found we had very good appetites, and supped well on biscuits and water.

“We then had to make our arrangements for the night. Our mooring ropes had been burnt, and we were thus cast adrift from the ship, and were afraid of getting out of sight of it during the night. A portion of the masts and rigging were floating near the ship, and to this we fastened our boats; but so many half-burnt spars and planks were floating about us, as to render our situation very perilous, for there was a heavy swell, and our boats might have been stove in by coming in contact with them.

"We therefore cast loose again, and kept at a distance of a quarter or half a mile from the ship by rowing when necessary. We were baling the whole night. Ourselves and everything in the boats were thoroughly drenched, so we got little repose: if for an instant we dozed off into forgetfulness, we soon woke up again to the realities of our position, and to see the red glare which our burning vessel cast.

"At length morning came; the dangers of the night were past, and with hopeful hearts we set up our little masts, and rigged our sails. Then pencils and books were hunted out, and our course and distance to Bermuda calculated; and we found that this, the nearest point of land, was at least seven hundred miles away. But still we went on full of hope, for the wind was fair, and we reckoned that, if it did not change, we might make a hundred miles a day, and so in seven days reach the longed-for haven."

It is not difficult to imagine their feelings that day; their ship with its cargo and Wallace's collections and note-books was a total loss. The nearest land was seven hundred miles away; their food supplies were not great, and their water would have to be used with great care. As the sun got higher, the heat became intense and their thirst increased. Their chief consolation was that they were on the usual track of ships.

As Wallace recorded, the first day's weather was in their favour with a light breeze, but on the second day it changed from east to south-west; this meant that they were forced off their direct course for

Bermuda. The third day was squally with heavy rain at times.

Wallace had perhaps been through too many trying experiences during the past four years to be alarmed now. He even noted that "at night I saw several meteors, and in fact could not be in a better position for observing them, than lying on my back in a small boat in the middle of the Atlantic".

By the fifth day their position had become much worse. The wind was now blowing from the west and taking them out of the usual routes of shipping and farther away from Bermuda.

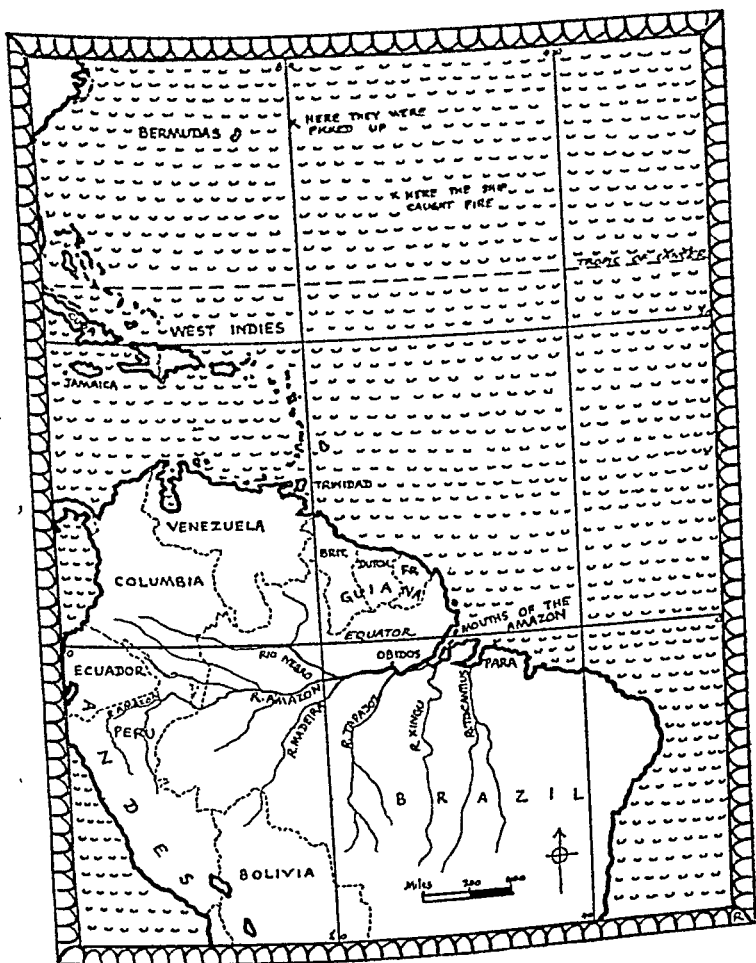
At the end of their first week they were only half-way to the island; they cut down their allowances of food and water to make both last as long as possible. Under the hot tropical sun, thirst was their chief enemy. Even then Wallace could note: "Many dolphins swam about the boats; their colours when seen in the water are superb, the most gorgeous metallic hues of green, blue and gold: I was never tired of admiring them."

The squally weather was followed by two days of calm in which they could make little headway. Their spirits sank lower and lower. Thirst became a torture, and great self-control had to be used in making their small supply of drinking water last. Some would have been ready to take one good, long drink, and then chance what followed, but saner thoughts prevailed.

It was not until they had been eight days at sea in their open boats that relief came. At about 5 o'clock that day a sail was sighted; they judged that it was at

FIRE AT SEA

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least five miles off but making their way. With renewed vigour the men pulled on the oars, and after two hours' rowing they got alongside.

They were welcomed on board, and, records Wallace, "the men went first to the water-casks, and took long and hearty draughts".

The ship was the *Jordeson* bound for London from Cuba with a cargo of wood. At the time they were picked up they were still two hundred miles from Bermuda.

Bad weather delayed them considerably; in one storm they almost foundered; their food supplies, with the extra men to feed, got very low, and it was not until eighty days had passed that Wallace landed in England after leaving Para.

It was not, he says, until he had recovered from his weakness that he realised the extent of his losses. Practically all his collections had gone to the bottom besides most of his note-books and drawings; the small number of specimens he had previously shipped to England were all he had to show for four years' roughing it on the Amazon.

VI

The Dark and Bloody Ground

BEFORE the eighteenth century all the settlements in North America were between the line of mountains known as the Appalachian Highlands, and the east coast—a narrow strip of land not more than 150 miles wide. Beyond those mountains lay the hunting grounds of the Indians: Cherokees, Chickasaws, Shawnees and Iroquois.

A few daring traders like John Findlay had penetrated beyond that barrier and had got glimpses of its richness as a hunting ground and grazing land. But few followed.

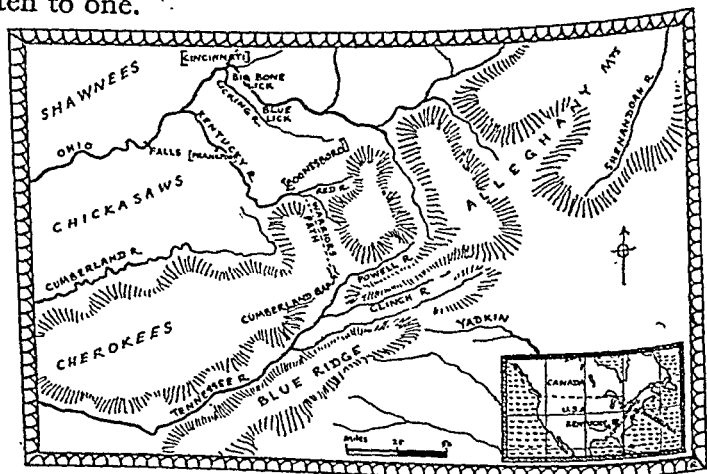
In 1717 a Devonshire man, George Boone, had migrated to America and had settled with fellow Quakers some fifty miles west of Philadelphia. His son, Squire, prospered, and amongst his children was one whose name is famous as perhaps the greatest of all wilderness scouts—Daniel Boone.

By the age of twelve Daniel could handle a rifle, and at thirteen he went off on hunting trips of his own to get meat and skins. In those dangerous times, when every male was needed to guard home and stock, boys grew up more quickly than they need to in our day.

In 1750 Squire Boone decided to move farther away from civilisation, so he left his lands and trekked with

his family and possessions down the valley of the Shenandoah to the south-west and settled on the River Yadkin some 400 miles away from his old home.

There he was right on the border, and the Indians in that region outnumbered the white men by at least ten to one.



It must not be thought that the Indians were always at war with the white men; there were outbreaks by separate tribes, but there was much exchange of trade, and for months at a time all would go smoothly. Then some raid on an isolated settlement would stir up strife.

When you hear the term 'Indian Summer' used for fine, dry days in autumn, it is interesting to recall that it had a far from pleasant meaning to those early settlers in America; at that time of the year the Indians

were liable to set out on a war trail against the white men just before the winter days made it impossible to do much.

Daniel Boone was brought up amidst all these dangers, and he early knew what it meant to fight Indians. But he also learnt from them a great deal of their woodcraft and hunting skill, until he himself was more than the equal of the most skilful Indian.

For some years he stayed at home with occasional absences for hunting expeditions. He would go off with the wagon train to bring up goods from the coast, and doubtless he would hear travellers' tales of the good hunting grounds beyond the mountains.

He married in 1756 and settled with his wife in a log cabin on his father's land. A few years later rumours reached them that in the southern part of Florida there was wonderful land to be had suitable for settlers.

So Daniel Boone took his family south, but he did not stay there, for he found that Florida was a gameless country, and that did not suit him at all. Back they came to the Yadkin settlement.

In the autumn of 1767 Boone decided to explore the unknown country 'behind the ranges'. As companion he had a friend named William Hill. Their plan was to spend some months hunting and exploring, and then to sell the skins and furs on their return in order to repay their expenses and provide funds for their families.

They crossed the mountains to the Clinch River, and then turned west down the valley for some hundred miles. There they built a camp for the winter and

settled down to hunt. They were very successful, and returned home the following spring with a good haul of skins.

Curiously they had met no Indians, and indeed, except for a few seldom-used trails, the country seemed uninhabited.

In the following year, 1769, Boone set off with quite a company for a longer expedition much farther afield. They went by way of Cumberland Gap by the Warrior's Path to Red River; there they built their base camp. Then they paired off and set off hunting. Boone had with him a man named Stewart.

They were now in the country we all know as Kentucky, and at that period often referred to as 'the dark and bloody ground'. It was not the hunting preserve of any one Indian tribe, but was used by all, with the result that there were constant raids and battles. Here, too, the white man had to fight for many years to keep the footing he had found; the Indians were reconciled to their enemies being on the other side of the mountains, but they resisted this further invasion for long years.

Boone and Stewart had a successful summer hunting deer and buffalo, and until the 'Indian Summer' came all went well with them. Perhaps they had grown careless through not meeting Indians for so many months, but one day the two men were captured by a band of Shawnees who were returning from a hunting expedition.

The Indians robbed the camp of all the skins which had been so carefully stored, and they also took away the horses. This loot satisfied them, and with a warning

to the two hunters that they must go back over the mountains, the Indians went off again.

Now Boone particularly resented the theft of the horses and he was determined to get them back. Both he and Stewart knew perfectly well the risks they were running when they set off to trail the Indians.

For two days they followed that trail with all the cunning and skill in woodcraft they had, and at length they came up with their enemies. They waited until night fell; then slowly, foot by foot, they crawled into the camp, cut the tethers which held the horses, and then silently rode away.

So far so good, but unfortunately for them, Boone and Stewart did not know the geography of that part of the country, and it was therefore a fairly easy matter for the Indians to recapture men and horses.

This time the captives were taken along with the tribe. Boone had enormous patience; he always believed that time was on his side, and on many an occasion he had won through by waiting when others would have lost their heads and acted hastily. So this time he urged Stewart to obey the Indians in everything, and thus allay their suspicions until a good chance offered for escape.

They were well treated, though at times the two white men were made to dance for the amusement of the Indians. Boone waited.

The Shawnees turned north with their captives, and for days they steadily followed the trail to their regular camping grounds. Boone and Stewart behaved as if they were only too glad to go with them.

Then the chance came. The trail led along a ridge with dense growths of canes on the slopes. Boone gave the signal, and the two men plunged into the undergrowth below. It was almost like diving into a sea of vegetation.

In such a place it would have proved a difficult job to follow the two men. Probably the Indians felt that it was not worth the delay and bother, for how were the fugitives to live without weapons or food?

But Boone was not a tenderfoot. He had carefully noted the trails the party had taken; when opportunity came he had made marks of his own, and he had also memorised any landmarks which would help to guide them.

It was a long and weary journey the two men made, but eventually they reached their camp, only to discover that their companions had evidently given them up for lost, and returned home.

They set off in pursuit, and came up with the party and also found with them Daniel's brother, Squire Boone, who had brought out fresh supplies of ammunition and flour.

Once again they made a base camp at Red River, and set to work to replace the skins and furs the Indians had taken.

The winter passed and their hunting proved successful, but not without tragedy, for Stewart disappeared—and no clue to the cause was ever found; he may have been taken by Indians, or perhaps fallen in an inaccessible place and been unable to move. The wilderness kept its secret. Another of the company returned

to the Yadkin, and the two brothers were thus left alone.

In the spring they discussed their plans. Daniel wanted to remain partly to explore farther and partly to get a bigger stock of skins. So it was agreed that Squire should return to the Yadkin, sell the skins they already had, and return with more supplies.

Which was the braver? Probably neither of them considered the matter from that point of view, but Squire was setting out on a hundred-mile journey with a horse to carry the goods—so that escape would be more difficult if Indians got on his trail; while Daniel was thrown entirely on his own resources.

Daniel Boone was happiest when alone in the wilderness; even one companion was a crowd to him, and it is notable that he rarely had any bad luck on his own. It was during that first experience, however, that he was almost caught.

He had gone much farther afield, and one day was standing on the top of a cliff overlooking the vast plains of what was to be known as Kentucky. So wrapt was he in the beauty of the scene that he for once was off his guard.

Some Indians had been trailing him, and now it looked as though he could not escape, for they were on three sides while on the other was the precipitous drop which could only mean death.

So confident were the Indians that they stopped to jeer at him.

'The great hunter is now in our power!' they cried.



"Without a moment's hesitation he dropped off the edge."

'Now we shall see what the mighty white man will do!' laughed some.

They did see! Boone took in the position at one glance. He looked over the cliff. Some sixty feet below grew a maple tree. Without a moment's hesitation he dropped off the edge and caught the bough of the tree. The Indians could only stand and stare. Once more Daniel Boone had escaped them. Perhaps it was from that time that the legend grew up that nothing could harm this white hunter.

He followed the Licking, and saw the great herds of buffalo at the Blue Lick licking the salt. Then he followed the Ohio as far as the Falls. He returned by way of the Kentucky River and by the site of the later Boonesboro'.

By July 1770 he was back again at the base camp at Red River and there he found his brother, Squire, safely returned with fresh supplies. Once more the two brothers hunted and explored together.

About this period another party of pioneers had crossed the mountains, and one of them has recorded an amusing sidelight on Daniel Boone.

They were startled one day by a weird noise coming from the forest close at hand; at first they thought it must be a buffalo in pain. Carefully they made their way towards the noise.

To their amazement they found that it came from a man lying flat on his back who evidently thought he was singing. By his side was a tall hard hat. That told them who it was—Daniel Boone—for his hat was famous; it was half-way between a bowler and a top hat.

The Boones set off homewards in the spring of 1771. They had a fine stock of skins and furs, and the future looked bright. But, alas, at Cumberland Gap they were surrounded by Indians and lost skins, horses and rifles. They arrived at the Yadkin empty-handed, but with wonderful news of the new country they had explored.

Boone was determined to start a settlement in the new lands, but it was not until 1773 that he had gathered together a company of families to set off on this bold venture.

cabin, and then set off hunting to get food for his family.

Years of Indian wars followed and then the American War of Independence (1775-83), and Boone played his part as a scout. A fort was established near his old camp on Red River, and was called Boonesboro'; families of settlers moved across the mountains, and built their cabins within range of the fort.

There was danger all around them, for some of the Indian tribes were allied with the English against the Americans.

One incident out of many shows the risks they ran. Boone's daughter, and two other girls, were captured by Indians while they were boating on the river. He at once set off with three men to track down the band. The girls knew the ways of the woods, and had seized every possible chance of marking the trail by broken twigs, and bits of their dresses, and other signs. It all reads like a story right out of one of Fennimore Cooper's novels, but this is actual history.

Boone followed that trail at a furious pace; he caught up with the band and by making a sudden attack, drove off the Indians and brought the girls back to safety—if such a word can be truly used for the kind of life the settlers led.

Time and again the fort was besieged by the Indians, but under Boone's cool direction, was never taken.

In the February of 1778 things seemed a little quieter, and the settlement was badly in need of salt for preserving meat. Boone and a number of others set off for Blue Lick to get a supply. He came back by

himself with the first load of salt. A blinding snow-storm overtook him, and in the confusion he was again captured by his old enemies the Shawnees, who were always on his track. They admired the white man, and decided to adopt him into the tribe. This was done, and he was given the name of Big Turtle.

True to his usual policy, Boone made no resistance as soon as he saw it was useless, and for some months he remained with the tribe. Then he heard that they were planning to attack Boonesboro'. No time was to be lost. He gave no sign of his anxiety, but went about whistling and taking his part in the activities of the tribe. But all the time he was alert, waiting for a chance to get away. At last it came; the Indians were off their guard as he seemed so contented, but he slipped out of the camp, and set off on foot for Boonesboro'. He covered 160 miles in four days, and was in time to give the warning. Once more the Indians attacked in vain.

So his life went on—a charmed life it seemed, but his quiet and friendly nature made him loved of all men.

One final glimpse must suffice here to give you the character of the man. The settlement of Kentucky went on steadily, and once the war period was over, the country flourished and attracted more and more families.

When he was sixty-five, Daniel Boone decided to move again. He set off by boat with his family and goods down the river, headed for the Missouri—an unknown country once more drew him.

People gathered on the banks to bid him farewell, for they all respected and liked that tall, spare figure in the boat. One of them asked him why he was leaving the safety of Kentucky to go farther west. The answer sums up the man, 'Too crowded,' he said, 'I want more elbow room!'

To this let us add a remark he made at the age of eighty-five.

'Boone,' said a visitor, 'were you ever lost?'

'No,' came the reply, 'I never got lost, but I was once *bewildered* for three days.'

He died the following year, and was buried with his wife in Frankfort, the capital of what was once 'the dark and bloody ground'. There Kentucky has raised a monument to its greatest pioneer.

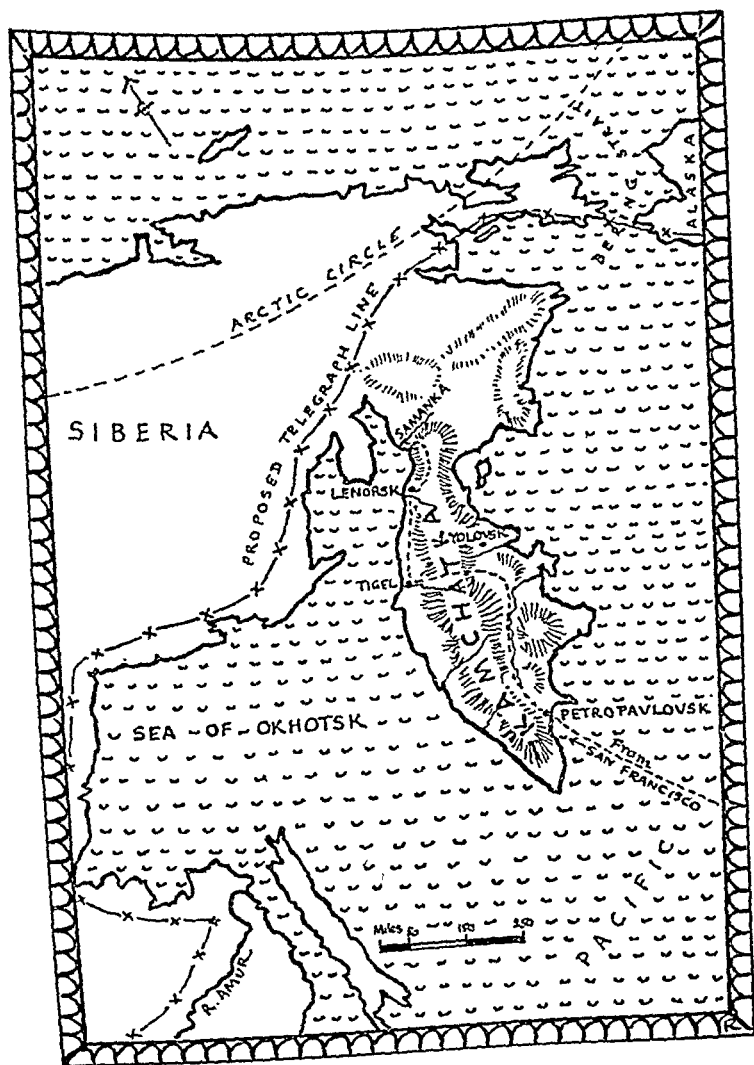
VII

In Unknown Siberia

THE first Atlantic cable was laid in 1858, and messages were exchanged between Queen Victoria and the President of the United States. A few days later the cable failed and, after repeated attempts to find the fault, it was decided to abandon the scheme. But the idea of direct telegraphic connexion between the Continents had captured the imagination, and a plan was put forward in 1863 to construct an overland line running through British Columbia, Alaska, North-eastern Siberia and Russia. The only sea-crossing was to be over the narrow Bering Strait.

A Western Union Telegraph Company was formed, and arrangements were set on foot for exploring the part of the proposed route which was not well mapped. This almost unknown area was the part of Siberia lying between the Bering Strait and Sea of Okhotsk.

A party of four men set off to carry out the work of exploration. They sailed from San Francisco in July 1865 for the Kamchatka Peninsula, and landed at Petropavlovsk. There they consulted with the local Russian officials and as a result decided to divide into two parties; one pair was to go in the ship to the mouth of the Amur and work northwards from there, while the other pair was to cross Kamchatka and work towards the Bering Strait. Here we are interested in the



fortunes of the second pair; Major Abasa, the leader, and George Kennan, who afterwards wrote an account of their adventures.

There are many small rivers and streams running down from the mountains to the sea, and these would make the first part of the journey across the peninsula easier, but the great problem was the mountain range which forms a backbone. Few of the local people had crossed this range, but a guide was obtained who thought he knew the way.

On the streams they were able to use canoes and rafts and their progress was steady with one or two minor incidents. Near YOLOVSK they were faced with the land stage of their journey. Their goods were transferred from the canoes to the backs of ten horses, and they set off in a cold, driving rainstorm. There was no well-made road but only a rough track hardly a foot wide which followed a swift mountain stream and time again crossed it. Fallen trees, great boulders, land-slides, and masses of volcanic rock made their journey one of considerable danger.

Kennan almost lost his life at one dangerous point, and was only saved by the fact that one of his stirrups broke. They had been crossing the torrent in a deep ravine when his horse took fright. Kennan was thrown out of the saddle, but one foot was firmly wedged in the stirrup. The horse scrambled up the ravine, dragging its rider over the ground by one leg. Kennan tried to protect his head with his arms, but finally his horse kicked him in the side; just then the stirrup broke, and the rider was left unconscious on the ground. Had the

horse still been dragging him, he would undoubtedly have had his head smashed on the rugged rocks. Fortunately he had no bones broken, and was able to mount again after a good rest.

Beyond the source of the torrent they climbed under new conditions; the surface was not firm rock, but a spongy covering of moss into which the horses sank at every step; progress was therefore slow. At last they reached the summit of the pass; the scene was desolate. Not a tree gave shelter, and the icy wind and the drenching rain made the travellers' spirits sink very low. It was late afternoon, and they must find some kind of shelter before nightfall. They wandered about with clouds drifting over them for four dreary hours, until they found an abandoned hut. It had been made with rough logs banked up outside with moss and earth, but it had long since fallen into ruin. However, they made good use of some of the logs to get a fire going. As no stream was to be found, water was squeezed out of the moss for cooking and drinking.

They passed a restless night, but day brought a break in the weather, and they could then see to the west of them the Sea of Okhotsk, and to the east the Pacific.

Now their course was down the western slope of the mountain range, and this proved an easier task. They camped out for one more night, and did the last stage by floating down the river, which brought them to Tigel. They had taken sixteen days to cover a distance of some 750 miles.

They rested at Tigel for some days, and took the opportunity to overhaul their gear and collect further supplies of food. They then followed the coast without difficulty to Lesnorsk. Here they were confronted with a difficult problem. Just north of the little town the mountains came down to the sea in high, precipitous cliffs; they cut off the shore route which the party had taken from Tigel. The natives assured Major Abasa that it would be quite impossible to get laden horses over the mountain, and they even doubted if unladen ones could do it. The scheme they decided on, was that the Major should take all the portable gear round by boat, while Kennan should take the horses over the mountain and they should meet at the mouth of a small river called Samanka. They even arranged a system of signals, as it looked as though the shore party could keep within sight of the sea and the boats.

Kennan had not gone far up the mountain track before he discovered that the carefully arranged signals could never be used; the track did not keep within sight of the sea, but was quickly cut off by projecting bluffs and spurs.

He passed a lonely time in his first camp, as his only companion was a local guide who could not speak English. The second day's journey went without accident, and by nightfall they had covered half the distance between Lesnorsk and the Samanka. The route took them through a narrow, tortuous valley, over spongy swamps of moss, and across deep, narrow creeks. There was one dangerous stretch, where the valley narrowed to a wild, rocky canyon, 150 feet in

depth, at the bottom of which ran the mountain torrent, foaming round sharp rocks, and tumbling over ledges of lava. At first Kennan thought there was no possible way through, but his guide led him along a narrow track, which took them almost down to the stream and then up again, only to lead down once more.

The guide had wisely dismounted, but Kennan thought that he could trust to the sure-footedness of his horse. Here is his account of what happened.

"About half-way through, where the trail was only eight or ten feet above the bed of the torrent, the ledge, or a portion of it, gave way under my horse's feet, and we went down together in a struggling mass upon the rocks in the channel of the stream. I had taken the precaution to disengage my feet from the treacherous iron stirrups, and as we fell I threw myself toward the face of the cliff so as to avoid being crushed by my horse. The fall was not a very long one, and I came down uppermost, but narrowly escaped having my head broken by my animal's hoofs as he struggled to regain his feet. He was somewhat cut and bruised, but not seriously hurt, and tightening the saddle-girth I waded along through the water, leading him after me, until I was able to regain the path. Then climbing into the saddle again, with dripping clothes and somewhat shaken nerves, I rode on."

Towards evening they reached a point where Kennan could see no way ahead, but the guide pointed to the top of the range and indicated that their route lay straight over the ridge. They camped where they were

in order to be fit for what was obviously a stiff climb the next day. It proved a wise decision for another reason; during the night the snow began to fall, and by morning there was a driving snowstorm. At first Kennan was inclined to turn back, but he knew the Major would be expecting him at the River Samanka, and if he did not turn up to time, his failure would cause much anxiety.

Their adventures are best described in George Kennan's own words. "Hardly had we ascended two hundred feet out of the shelter of the valley before we were met by a hurricane of wind from the north-east, which swept blinding, suffocating clouds of snow down the slope into our faces, until earth and sky seemed mingled and lost in great white, whirling mist. The ascent soon became so steep and rocky, that we could no longer ride our horses up it. We therefore dismounted, and wading laboriously through deep, soft drifts, and climbing painfully over sharp, jagged rocks which cut open our seal-skin boots, we dragged our horses slowly upward. We had ascended wearily in this way perhaps a thousand feet, when I became so exhausted that I was compelled to lie down. The snow in many places was drifted as high as my waist, and my horse refused to take a step until he was absolutely dragged to it.

"After a rest of a few moments we pushed on, and after another hour of hard work we succeeded in gaining what seemed to be the crest of the mountain, perhaps two thousand feet above the sea. Here the fury of the wind was almost irresistible. Dense clouds

of driving snow hid everything from sight at a distance of a few steps, and we seemed to be standing on a fragment of a wrecked world, enveloped in a whirling tempest of stinging snowflakes. A long fringe of icicles hung round the visor of my cap, and my clothes, drenched with the heavy rain of the previous day, froze into a stiff, crackling armour of ice upon my body. Blinded by the snow, with benumbed limbs and chattering teeth, I mounted my horse and let him go where he would, only entreating the guide to hurry and get down somewhere from this exposed position. He tried in vain to compel his horse to face the storm. Neither shouts nor blows could force him to turn round, and he was obliged finally to ride along the crest of the mountain to the eastward. We went down into a comparatively sheltered valley, up again another ridge higher than the first, around the side of a conical peak where the wind blew with great force, down into another ravine and up still another ridge, until I lost entirely the direction of our route. I only knew that we were half frozen, and in a perfect wilderness of mountains."

Presently the guide had to admit that he too had completely lost his way, and did not know where to turn. Here was an awkward situation. Kennan did not know enough Russian to discuss the matter; he hoped that they could at least find some sheltered valley where they could camp until the storm had lessened. But after two more hours of aimless wandering they seemed to be getting deeper and deeper into the maze of mountain ridges without reaching shelter.

Clearly if they lingered much longer they would all get frozen. Something *must* be done.

Kennan decided to take the lead himself; he took out his compass and got the direction of the coast. The guide had never seen such an instrument before and could not understand its use.

‘How can the compass know anything about these mountains?’ he asked. ‘It has never been this way before. I’ve been travelling here all my life, and yet I don’t know where the sea is!’

Kennan assured him that the compass could be trusted to lead them to the sea. So he got his bearing and led the reluctant party on it. It was a slow business, as the snow was deep, and their limbs were almost numb with the cold. But the compass proved their salvation, for suddenly they found themselves on the edge of a precipitous cliff; a hundred and fifty feet below them the sea was dashing itself on the rocks.

The guide asked to see the compass again; he looked at it with great respect, but shook his head, for here was some magic beyond his experience!

They continued along the edge of the cliff as far as that was possible, but they had to cross several more ridges of mountain before they at length found a track leading down to the beach. By then it was dusk; they could see no sign of the other party under Major Abasa, so they decided to camp where they were.

“We were never more glad to get under a tent,” wrote Kennan, “eat supper, and crawl into our bear-skin sleeping-bags, than after that exhausting day’s

work. Our clothes had been either frozen or wet for nearly forty-eight hours, and we had been fourteen hours on foot or in the saddle, without warm food or rest."

The morning brought no sign of the boat and the Major. Kennan feared that it might have been wrecked in the storm which had raged over sea as well as over land, and he became very anxious. The arrangement had been that if the boat was not there he was to wait a day and then return to Lesnorsk. It looked as though they would have to face that terrible mountain crossing again. No one was anxious to do that, and the guide suggested that if they took advantage of the tides, they could at least shorten their route by many miles and rejoin their route across the mountain at a point where they knew the way.

All depended on their being able to ride some thirty miles along the strip of beach between the tides. Anything was better than that terrible mountain journey, and the very recklessness of the plan was attractive.

You must not imagine a beach of hard sand; had it been that the thirty miles would have offered no difficulty; but the shore was cumbered with great rocks and masses of seaweed, and they had to pick their way with care.

They had gone about half-way when they saw some figures in the distance hurrying along the base of the cliffs. At first they thought they were bears, but as they got nearer they recognised two Russians from Lesnorsk. They came with a message from the Major. It read as follows:



"We galloped through several feet of water and in five minutes were safe."

"Sea-shore, 20 miles from Lesnorsk. Driven ashore here by the storm. Hurry back as fast as possible.

S. Abasa."

The two messengers had been delayed by the storm, and had decided to risk the beach route rather than climb the mountains.

"There was no time for explanations. The tide was running in rapidly, and we must make twelve more miles in a little over an hour. We mounted the messengers on two spare horses and were off at a gallop. The situation grew more and more exciting. At the end of every projecting bluff the water was higher and higher, and in several places it already touched the cliffs. In twenty minutes more the beach would be impassable. Our horses held out nobly; only one more projecting bluff intervened. Against this the sea was beginning to break, but we galloped through several feet of water, and in five minutes were in safety."

They then picked up their old route back to Lesnorsk. The attempt had failed, but they had been through experiences worth recording.

They were to endure further hardships in their explorations, but these cannot be told here. Their full scheme came to an abrupt end in the summer of 1867 for news was received that the Atlantic cable laid in 1865 had proved a great success, and the scheme for an overland telegraph line was therefore abandoned.

An enormous amount of work had been done by various parties on the two sides of the Pacific. Some 15,000 posts had been prepared; miles of roads had

been blazed and huts built in readiness for the setting up of the line. All that had to be scrapped, but probably none of the explorers regretted the pioneering experience they had gained in Siberia. Apart from the fun of it all, they had added much knowledge to the little that was known of the Kamchatka and its inhabitants.

VIII

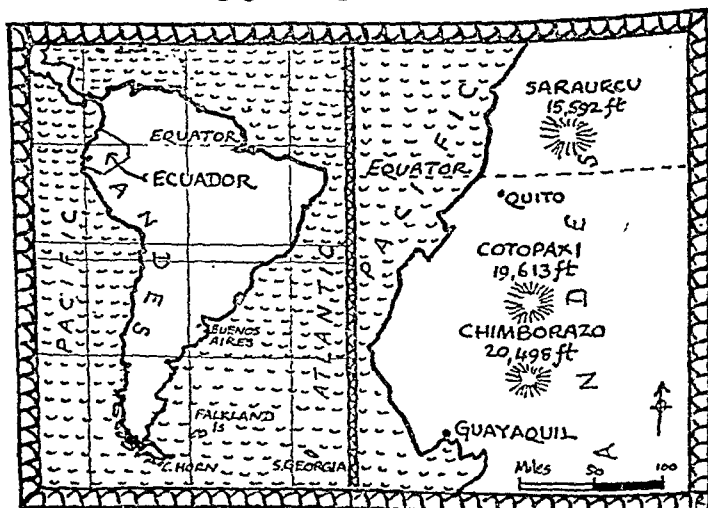
The Great Andes of the Equator

SOME men explore the great snow wastes of the Poles; others endure the heats of tropical forests, and the uncharted seas have lured some to adventure. But there is one small group of explorers who have chosen all the risks of mountaineering. It is true that the physical joy of overcoming obstacles has been their chief attraction, but they too have added to our knowledge of the earth's surface.

Mountaineering may almost be called a modern invention as a sport. Its popularity can certainly be dated from the year 1857 when the Alpine Club was formed by a little band of enthusiasts in this country. Their purpose was to explore the Alpine Ranges of Switzerland, but soon all kinds of mountain climbing came within their interests. Later other countries also formed Clubs, but this country of ours can claim the credit for having made mountaineering a great sport.

Amongst the most famous of our mountaineers was Edward Whymper, and his first attempts came about almost by accident. He was a wood-engraver by profession, and he was sent out to Switzerland to make sketches of the mountains for illustrations to a book. Climbing seemed like second nature to him, and soon he was attempting peaks which no one had before dared to climb.

In the year 1865, when he was twenty-five years old, he climbed the Matterhorn (14,705 feet). That achievement became well known for tragic reasons. Four of his companions were killed on the way down owing to a sudden strain on a weak rope, and it was only the coolness and courage of Whymper himself that he and the two surviving guides got down safely.



That catastrophe seemed to take the heart out of his Swiss climbing, and he turned his attention to other lands. Thus he paid two visits to Greenland and added considerably to what little was then known of that strange country.

Then in 1879 he set off for Ecuador and the Andes. He had two purposes in view; he wanted to study the

effect of great heights on human beings, and also to climb some of the peaks of that formidable range of mountains, an almost unknown country at that time.

As companions he had his old Swiss guide, Jean-Antoine Carrel, and his cousin Louis Carrel. Other help they hired when needed.

The inhabitants of Ecuador regarded Whymper and his party with suspicion; surely no one would come all that way just to climb a mountain—especially a mountain guarded by evil spirits! No! They were hunting for treasure! That country was full of rumours—and still is—of buried treasure dating back to the times of the Spanish occupation by Pizarro.

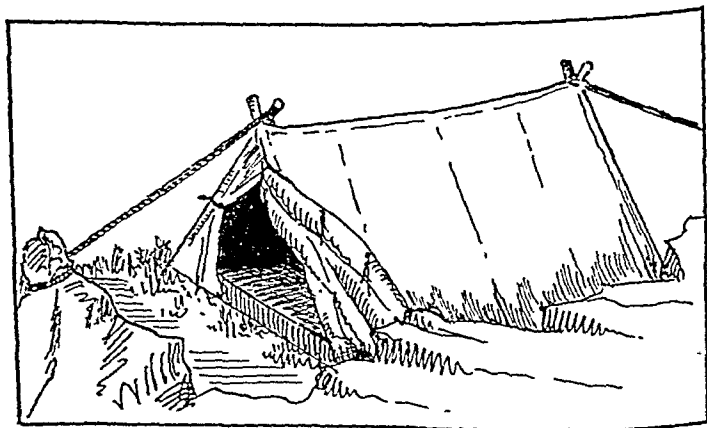
The two peaks Whymper particularly wanted to climb were Chimborazo (20,498 feet) and Cotopaxi (19,613 feet), both of them higher than any mountain in Europe, and both quite unknown.

It was clear that they would have to camp out at considerable heights—indeed it was only by so doing that the effects of rarity of atmosphere could be observed.

The tent is the most interesting item of their equipment. It was designed by Whymper to withstand the hard conditions of mountain camping. The tent is still known by his name, and has been used in all parts of the world with complete success.

The sketch will show its shape and general arrangement. Instead of a single upright pole at each end, a pole is sewn into each of the four edges; they are fastened at the top by a nut and bolt so that they hinge easily. A single rope is used; this runs freely under the ridge and is caught up by one pole at each end. The

two ends of the rope can be secured either by tying round rocks, or round ice-axes driven into the snow. The floor is sewn into the tent with plenty of overlap so that rocks and so on can be placed on it and keep the whole rigid. A low sill of canvas is sewn across the foot of the door to keep out the snow. Two people can erect it in three minutes—an important consideration under bad weather conditions.



For the ascent of Chimborazo, Whympers engaged the services of a number of Indians with mules to carry the gear and food supplies. Their first camp was over 14,000 feet up; to this they managed to get the mules and most of the equipment and food they needed, but the Indians were glad to return after experiencing a night out under such conditions.

The second camp was at a height of 16,664 feet, nearly 2000 feet higher than the Matterhorn. The site

was at the foot of a wall of lava which gave good protection from one side. There was snow at hand to supply water, and there was a fair amount of level ground round about.

It was at this camp that they had their first experience of mountain sickness; all three men had to lie down and pant for breath; they had intense headaches, and were quite unable to exert themselves. This condition lasted for twenty-four hours, then gradually their energy returned, but for some days they had to take things slowly.

The next camp was pitched amidst the lava at a height of 17,285 feet. They explored the next stage of their climb and decided on the course they would take. Another night's rest in the camp, and the great day came. They set off at 6 o'clock in the morning. The weather at first was good, and they made steady progress over the snow and ice, until at about 10 a.m. they were 19,400 feet up, and had reached the most difficult part of their climb.

An hour later the weather changed for the worse. The wind rose and they came to very soft snow which could not be crossed in the ordinary way. The leading man went in up to his neck, and had to be hauled out. At first they thought they must have got to an area of crevasses, and they spent some time scouting round for firmer footing. But it was all the same—deep, soft snow.

They found that the only way of progressing was to beat every yard flat, and then to crawl on all fours; even then time and again one of them would disappear and have to be helped out.



"The leading man went in up to his neck and had to be hauled out."

After three hours of this exhausting work, they had climbed only some 200 of the remaining 500 feet. There was also another difficulty. Chimborazo has two summits and it is impossible to tell from lower down which is the higher. They naturally made for the nearest in the hope that it would prove the real top.

As the slopes steepened, the snow became firmer, and they did the last hundred feet or so with comparative ease, only to find that the farther peak was the true summit!

It needed all their pluck and resolution to summon up the extra effort to reach the other peak.

Here is Whymper's own account. "We had to descend to the plateau, to resume the flogging, wading and floundering, and to make the highest point, and there again, when we got on to the dome, the snow was reasonably firm, and we arrived upon the summit of Chimborazo standing upright like men, instead of grovelling, as we had been doing for the previous five hours, like beasts of the field."

The wind howled round the summit, but in spite of the terrible conditions and their fatigue, they took their barometric readings, and then set off down. Their upward track made the going easier, but it was dark before they at length stumbled into their camp after being out for nearly sixteen hours.

So the first peak of the Andes had been conquered.

They had to rest for some weeks down in the plain, as one of the Carrels was suffering from frost-bitten feet. Their next aim was to climb Cotopaxi, not so much on account of its height or the difficulty of the

ascent, but because it is a volcano and Whympers thought it would add to scientific knowledge to explore the crater.

A party of natives was formed to bring the gear with the mules as high as possible for the main camp. They also took with them two live sheep for future provisions. Whympers's account of that first camp (15,130 feet) is well worth giving in full, as it will recall past memories of trials which many a camper has experienced on a smaller scale.

"It was not a very eligible locality, for two essentials of a good camping place—wood and water—were wanting; and one half of my forces went upwards in quest of snow, whilst the others descended two thousand feet in quest of scrub, leaving me in charge of the camp. One of the sheep had already been killed, and some of the choicest cuts had been placed in our pots and kettles to be boiled, and I promised my people that when they returned they should have such a feed! But when they were gone I began to think that I had promised too much, for the fire would not burn, and I had to lie flat on my stomach and blow hard to keep it alight at all."

Here it may be pointed out that the rarity of the atmosphere makes it very difficult to get fires to burn at such heights, nor does it make blowing an attractive occupation. Whympers's troubles were only beginning.

"And then snow and hail began to fall, and I found my feet got uncomfortably cold while my head was exceedingly hot, and just at this time I heard a noise, and, looking up, perceived that the other sheep, which

had not been turned into mutton, had escaped from its fastenings and was hurrying down the slope. I gave chase and caught it, and talked to it about the wickedness of attempting to escape. The sheep certainly looked sheepish, but it would not return upwards without much persuasion.

"When we got up again I found that the sheep that had been turned into mutton had turned over into the volcanic ash, and had nearly put the fire out. All the broth had descended into the ash, and the meat itself was covered with a sort of gritty slime.

"But all's well that ends well! I came up to time, and my people were never the wiser, though I did clean that meat with our blacking-brush, and wipe out the pots with a pocket-handkerchief."

When they set off for the final ascent, they found that the route was an easy one, and indeed might be called a walk. They at length arrived at the foot of the huge slope of ash, about 750 feet high, leading up to the crater itself. As they wanted to observe the crater at night, they pitched a tent with some difficulty on the ash slope. They had first to make a platform for it with their hands; the ropes were secured to large blocks of lava.

A sudden squall threatened to carry away the tent, but when that had passed there was no further danger from weather, but another unexpected peril arose. They noticed a smell of rubber, and Whympfer found when he put his hand down that the floorcloth was almost melting, for although it was intensely cold at that great height, the ground heat was considerable,

being 110° F.; outside the tent and a few feet above the ground the temperature was 13° .

As soon as it got dark they set off for the edge of the crater. As a guide they rigged up their long climbing rope as they went so that they could be sure of getting back.

At the brink Whymper crept forward and one of his companions gripped him by the legs. This is what he saw.

"Cavernous recesses belched forth smoke; the sides of cracks and chasms no more than half-way down shone with a ruddy light; and so it continued on all sides, right down to the bottom, precipice alternating with slope. At the bottom, probably twelve hundred feet below us, there was a rudely circular spot filled with incandescent if not molten lava, glowing and burning, with flames travelling to and fro over its surface. At intervals the volcano regularly blew off steam. It rose in jets with great violence from the bottom of the crater, and boiled over the lip, continually enveloping us. The noise on these occasions resembled that which we hear when a large ocean steamer is blowing off steam. It appeared to be pure, and we saw nothing thrown out, yet in the morning the tent was black with matter which had been ejected."

They went up again the next day to take photographs and make accurate observations. The second great peak had been conquered.

An account of their proceedings was given by one of their Indian porters who had ventured up near enough to watch them.

'Tell us, what did they do?' he was asked.

'The Doctor—so they called Whymper—went from one place to another, looking about. The other two seemed afraid of him, for they tied him up with a rope.' This is an unusual explanation of why mountaineers rope together!

'Did they find treasure?'

'I think they did. They went down on their hands and knees searching for it, and they wrapped some in paper and brought it away.'

'Was it gold?'

'I do not know, but it was very heavy.'

If he had seen the specimens of lava and dust which Whymper had collected, he would have been still more mystified at the strange behaviour of 'the Doctor'.

The party spent over six months in Ecuador, and had many trying experiences which would have disheartened men of less courage and determination. When, for instance, they set out to climb Saraucu (15,592 feet) they had first to cross some difficult country.

The land at the foot of the mountain was all marshy, and upon it grew reeds to a height of eight to ten feet. It would have taken several weeks to have cleared a track by using the machetas, or broad knives, of South America. They had to get through by parting the reeds with their hands as if they were swimming. The reeds sprang back into position, and as the edges were like razors it can be imagined that the explorers looked as if they had been through a particularly bloodthirsty fight by the time they reached higher ground.

At length they camped at about 13,000 feet, and there they were held up for six days by heavy rain. They set off for the ascent in a fog, and were soon on the glacier. Steering a course was by no means an easy business, and to mark the return route, they took with them a bundle of reeds and at intervals stuck one of these upright in the ice as guide-marks.

They had one difficult part to cross; it was a ridge like a roof-top, but after cautiously going along this, they got clear of clouds and were soon on the summit.

Weather played queer tricks with them. During one ascent a clear sky suddenly became overclouded; then followed rain, hail and sleet; after which came a furious fall of snow which was so thick that it was impossible to see a yard ahead. This all happened to come upon them just when they were going to pitch camp, and they found it out of question to get the tent up until the 'tormenta', as it is known locally, had died down.

On another occasion Whympers was helped by an Indian dog which had attached itself to him. The main party had gone on to pitch camp at an agreed spot, and Whympers had been collecting plant and other specimens. As he approached what he thought was the camp-site a storm sprang up; and in the blinding snow he could not find his companions. For two hours he searched.

He was some 16,000 feet up and had no compass, food; tent or matches. He set off downwards, and when he at last came below the mists it was to find himself in an unknown valley. Here he was forced to

get across some boggy land, and for two hours he forced his way through slime, clutching at reeds and not daring to let go for fear of being swallowed up. It was dark by the time he was on firm ground. There was no sign of habitation anywhere. He found a thicket, where he and the dog slept fitfully until day-break.

Then on he went again. He found the remains of a track, a very old one and nearly overgrown. Here the dog proved helpful, for he stuck to the path while Whympers had to make wide detours to avoid undergrowth and marsh. Had it not been for the dog he might have got hopelessly lost in what was almost a jungle.

The path brought him to a hut, and there he was able to get some food, and later find his way back to the base.

As Whympers said at the end of his Andes explorations: "A traveller should be prepared to take the sour with the sweets." And his good-humoured account of his adventures shows that he acted up to that motto.

IX

Murder of an Explorer

IF land exploration before our scientific age was full of risks, sea-voyaging was even more dangerous. To-day we hear in our own homes broadcast messages about ships in trouble and how others are speeding to their help, but in former times many a ship left these shores never to return. Long afterwards a bit of wreckage may have given a clue to some disaster.

The only way of sending news on a long voyage was by some homeward-bound ship met by chance. A long-lost husband or son might suddenly return after years of silence and anxiety.

There were not only the perils natural to the sea, such as storms and wrecks; there was the terrible toll taken by death through disease. Worst of all was scurvy; this was due entirely to lack of fresh food, especially of green vegetables and fruit. There were very few ways of preserving food, and on a long voyage the chief item was 'salt junk'—the name tells you what it was like because 'junk' really means old rope.

To-day we think of ships as large and comfortable; indeed many are like floating hotels, and it calls for no greater courage to cross the Atlantic than to go on a train journey. As long as wooden ships were the only kind made, no great size—as we think of size—was reached. It needs a vivid imagination to realise

the difficulties and dangers faced by men in those less comfortable times.

Here I want to tell you of the tragic end of the greatest of all explorers by sea, Captain James Cook, the son of a farm-labourer. His whole life was a romance, and during it he added more to our knowledge of the geography of the seas than any other man.

This yarn concerns his last voyage. He left England in July 1776 with two ships, the *Resolution* of 462 tons, and the *Discovery* of 300 tons. Look at those figures again, and then compare them with the 73,000 tons of the *Queen Mary*.

It is interesting to note that the Master of the *Resolution*, Cook's own ship, was that William Bligh who later was to be notorious as 'Of the *Bounty*'. Whatever his crimes may have been, it should be remembered that he was one of the great navigators of his age.

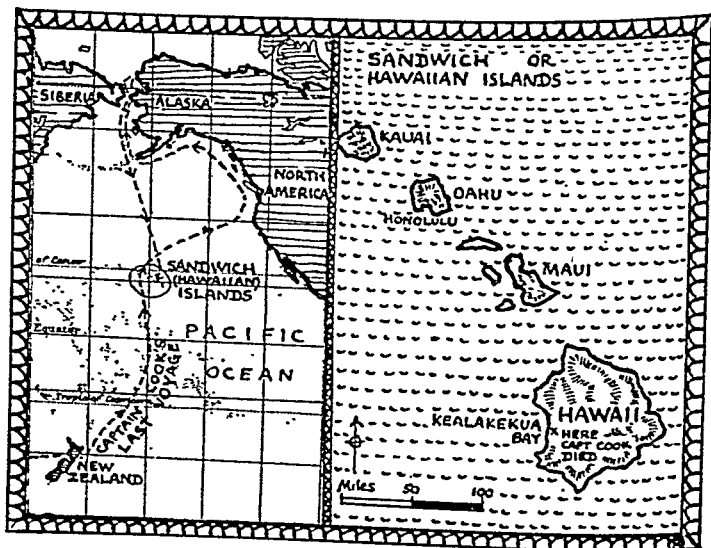
Cook was directed by the Admiralty to try to find a way round the north of America from the Pacific into the Atlantic, from west to east.

You have heard of the North-west Passage. Before the days of the Suez or Panama Canals, many attempts were made to find a quicker way from England to India and the East than round the Cape of Good Hope. These attempts had been from the east, by Hudson Bay and Greenland, but the Admiralty thought that it might prove easier to find the Passage from the opposite direction—the west. So Cook was sent off on the quest.

He sailed out round the Cape of Good Hope—it took him three months' sailing to get there (thirteen

days now)—then he struck across to Australia. He had explored all that part of the ocean in his previous voyages.

They touched Van Dieman's Land (our Tasmania) after a further two months' sailing, and there they proceeded to take in fresh water and food.



They next put in at New Zealand and then sailed north through the hundreds of islands, atolls and reefs, scattered about the Pacific just south of the equator. Several new islands were charted and named. One, since they spent Christmas of 1777 there, was named Christmas Island...

Once more they sailed north, and on 18 January

1778 land was sighted. This was to prove the most unlucky of Cook's many discoveries, for these were the Sandwich Islands as he named them.

They are now called the Hawaiian Islands, and the name of one of the towns, Honolulu, has become a household word. We associate it with dark-skinned beauties and crooners! We seldom remember that it was on the beach of Hawaii that Cook met his tragic death.

If you read his own account of his voyages you will be puzzled by some of the names. He wrote them down as they sounded, so Hawaii becomes Oneecheow, and what we call Kealakekua Bay was to him Karakakooa Bay.

Nothing, however, could have been more delightful than that first visit. After his many years of voyaging, Cook had worked out a method of meeting strange natives, and it is noticeable how successful he was, for there was nothing of the bully about him, whether as a Naval Captain or as an explorer. It was a pity that Bligh did not learn from Cook the value of considering the comfort and health of his crew.

As the *Resolution* was brought to off one of the islands, several canoes put out from the shore. They came alongside, but nothing would persuade the natives to come on board. Presents were given them, and they especially wanted iron, of which they had heard but never used.

Soon there was a brisk trade in nails in exchange for pigs and potatoes. The natives had no use for beads, nor did a looking-glass interest them.

One characteristic became troublesome. The natives seemed to think that they could take anything they fancied, and when at last they ventured on board, they had to be watched carefully.

This led to one unfortunate accident which may well have had some bearing on the final tragedy. Lieutenant Williamson had set off with three boats to look for a good landing-place and for fresh water. As soon as his boat was beached, the natives crowded forward and began to walk off with oars, muskets, and anything else they could get hold of.

Williamson lost his head, and as the crowd pressed forward he fired and unfortunately killed one of the natives. This mishap was not reported to Cook at the time, and the natives may have taken offence at what seemed his indifference.

When Cook himself went ashore the natives all fell flat on their faces as a sign of submission. He again distributed presents and made arrangements for renewing the ships' water supply and for buying fresh meat and vegetables.

The natives gave no trouble of any kind, and indeed proved most friendly. For instance, they helped the sailors roll the water barrels down the beach, and in any other ways they could.

There was one disturbing custom of the natives; they were cannibals. They frankly admitted that their custom was to eat those killed in battle, and added that they would have no hesitation in eating the sailors if they were killed on the shore.

They found it difficult to believe that such pleasantly

sailed in. This was Kealakekua Bay on the western side of Hawaii.

Up to this point we have Captain Cook's own Journal to give an account of his voyage, but the rest of the records are from those of Lieutenant King of the *Resolution*, and of Captain Clerke of the *Discovery*.

Although their reception was on the whole friendly, the officers became rather worried about the great crowds of natives who swarmed on the ships and especially about the numerous thefts which occurred. King was of the opinion that the presence of the Chiefs, who were now back, made the natives much bolder than on the previous visit.

It became necessary to complain time and time again about these thefts, and this no doubt helped to fray tempers on both sides. Thus when a rudder was stolen Cook had some trouble with one of the Chiefs to get it back.

Apart from these annoyances all went happily. The sailors were able to set about their tasks of filling the water barrels without any trouble. When an observation post was set up for taking exact positions, the priests marked the area with their taboo signs so that no native dared intrude.

Friendly feasts were shared, and Cook was made a Chief with all the elaborate ritual of local customs.

So all went happily until the time came to think of sailing away again. On the eve of sailing there was another feast and a most generous present of hogs—the wealth of the South Sea Islander—was made to Captain Cook.



"When a rudder was stolen Cook had some trouble to get it back."

the way down to the boats, two other Chiefs rushed out and urged Terecoboo not to go.

As they argued, the natives began to collect round in a great crowd with threatening gestures. It was noticed that some of them were armed with the very iron spikes which had been part of the barter between the natives and the ships.

Captain Cook saw that the alarm had spread and that it would no longer be possible to carry out his plan of making Terecoboo a hostage. He turned to Phillips and said:

‘We shall not get him on board without killing some of these natives.’

Phillips afterwards said that he thought the Captain was then going to order a return to the boats, but just at that point a native attacked Cook with a spike. Cook immediately shot him but without killing him.

This was the signal for a general attack.

‘Take to the boats’, shouted Cook, and they were the last words he was heard to utter.

The marines were so pressed in by the mob that they had no chance of using their weapons. Phillips was knocked down by a stone, and on getting up was stabbed in the shoulder, but he managed to get to the boats.

The marines in the boats opened fire to help their comrades, four of whom were down.

Whilst Cook faced the natives, no harm came to him, but he now turned his back on them to order the marines to cease fire. He was at once stabbed in the

On 4 February they set sail intending once more to survey the islands before setting off north.

They sailed round Hawaii but gales made their progress slow, and on the 8th they found that the foremast of the *Resolution* had given way. At first they thought that they could find a good anchorage on the east coast, but this proved impossible. So once more they made for Kealakekua Bay.

Their return was a surprise to the natives, and seems to have aroused some suspicion as to the reasons for this unexpected change of plans. However, there were no open signs of enmity, and the work on the new mast and on repairing the sails was allowed to go on without opposition.

The first indication of trouble came when the water barrels were taken to the well. The natives crowded round and were armed with stones and looked angry. But the Chiefs ordered them away.

Then there was another disturbance about small thefts from the *Discovery* which caused Captain Cook some uneasiness.

On the 14th a much more serious theft happened when the cutter belonging to the *Discovery* was taken. Cook decided that firm action was necessary. His idea seems to have been to get one of the Chiefs on board and hold him as hostage until the cutter was restored and the thieves punished.

He landed with Lieutenant Phillips and a party of nine marines. They marched at once to the village where the Chief Terecoboo lived. At Cook's invitation the Chief agreed to go aboard the *Resolution*, but on

Eight Hundred Miles in an Open Boat

IN 1914 Sir Ernest Shackleton set out on what would have proved the greatest Polar journey ever made; instead of doing that he was fated to lead a boat party which made one of the most heroic voyages of which there are records. The nearest approach to it was the amazing achievement of Bligh of the *Bounty* when he navigated his crew across 3500 miles of sea in an open boat to safety. But whereas Bligh was crossing a warm sea, Shackleton had to face the tempestuous seas of the Antarctic in gale conditions.

His original plan had been to land on the ice-bound shores of the Weddell Sea, cross the Antarctic Continent by sledge, and then to be met on the other side in the Ross Sea by another ship. The distance is about 1800 miles. He took charge of the Weddell Sea Party in the *Endurance*, a barquentine-rigged ship of about 350 tons.

They sailed from London on 1 August 1914. Three days later Great Britain declared war on Germany. Shackleton immediately placed himself and his crew at the disposal of the Admiralty, but in reply he received a telegram telling him to proceed on his expedition.

The voyage to Buenos Ayres was uneventful; they left there on 26 October, and set sail for South Georgia, an island of which we shall hear much more in this narrative.

back, and as he fell with his face into the water, the crowd set up a great shout and rushed forward.

All this had been seen from the *Resolution*, but it was impossible to give aid; the boats were already near the beach and so dense was the crowd that any attempt to use the ship's guns would have proved as fatal to the shore-party as to the natives.

Strong parties from both ships were landed and restored order, but it was some days before they were able to recover some of the remains of the leader.

So perished one of the great seamen of the world. Few men have added so much to our knowledge as Captain Cook, but he was so admired by his men in a period when life at sea was hard and often cruel, that his loss to them was like a personal tragedy.

Eight Hundred Miles in an Open Boat

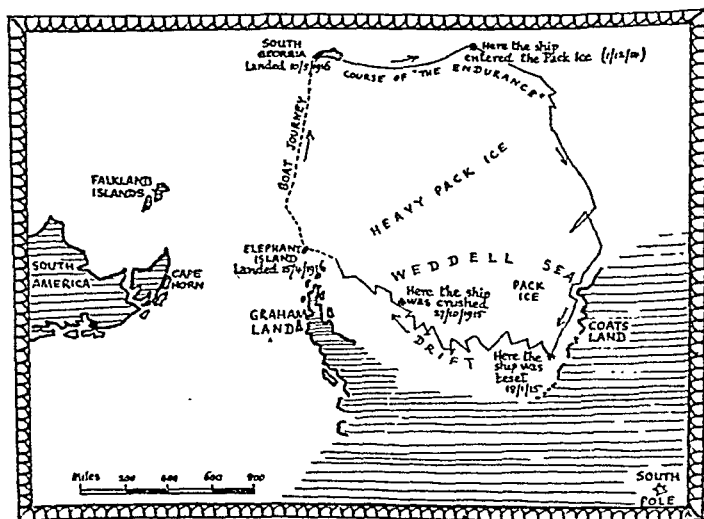
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South Georgia is a small but very mountainous island almost due east of Cape Horn; it is the most southerly British possession, but is chiefly used as a whaling station by Norwegian companies. Here Shackleton spent about a month in making his final arrangements, and seeing that everything was in good order on board the *Endurance*.



On 5 December 1914 they headed south for the Weddell Sea. Ice was the great problem they had to face. How far would they be able to get before being stopped? Much depended on the answer to that question.

The Antarctic Continent consists of a roughly circular-shaped land area, ice-covered of course, with a

fringe of pack-ice which is always on the move, and varies from month to month in thickness and extent. As you will see on the map, this fringe covers a large area of the Weddell Sea, but if weather conditions are good, it does not offer quite such a barrier as in bad weather or in very severe cold. At times the pack is loose, and then a ship can make its way without much danger; at others the pack thickens and then it is dangerous; great pressure is caused by one mass of ice coming up against another; great blocks of ice get piled up like the walls of a canyon. This constantly changing nature of the pack makes navigation a matter of considerable skill and judgment.

The *Endurance* sailed into the Weddell Sea from the east and gradually made its way towards the coast of Coats Land. You must remember that it was summer in those parts while it was winter in England, and they wanted to get as far as possible before winter conditions set in, and the ship would be imprisoned in the ice.

About the middle of January 1915 they found it impossible to make further way through the pack-ice, so the fires in the engine rooms were allowed to go out, and the crew began their preparations for the winter.

Now the ice which surrounded them was moving steadily, and of course the ship drifted with the ice in whatever direction it happened to be going. Shackleton was worried because the unexpectedly bad ice conditions had prevented him taking the ship as far as he had planned, and now they were at the mercy of the

drift. In the spring she would be free again, but much depended on whereabouts she got out of the ice. So day by day the course of the drift was carefully charted, and on the map you will see that at the beginning of March the *Endurance* began to zigzag away from the land.

It is interesting to compare the possibilities of wireless in 1915 with those in 1938. The Argentine Government had promised to send out a special time-signal from New Year Island, but the ship's apparatus was unable to pick it up. In 1938 some Russian scientists were adrift on an ice-floe in the Arctic Sea, and were able to send out messages which resulted in their rescue. If Shackleton had been able to do the same, this story would have had a very different ending.

The winter months were full of activity. The scientists collected specimens and made their observations; the dog teams were got into condition; and as long as there was sufficient light, the crew played football on the ice.

By the beginning of May the sun had set for the winter; the temperature was at that period about 15 degrees below zero Fahrenheit. The month passed without noticeable incident; the ship, gripped by the ice-floe, drifted north-north-east, but with many a turn on her tracks as the course marked on the map shows. The rate of drift varied according to the strength of the wind; thus, for instance, the ship travelled 39 miles in five days of June.

In July they could once more look for the return of daylight, and it was then that the first serious pressure

on the ship began. Suddenly a lane might open out in the ice, and then as quickly close up again, the two sides pressing together and raising great blocks of ice on either side. There were weird noises; at one moment there would be a sound like heavy, distant surf; then might come a series of cracks, and sounds like cannon going off. A careful look-out had to be kept all the time in case the rudder was endangered, or the dog kennels on the ice threatened.

It was not until September that Shackleton began to get anxious about the power of the ship to withstand the increasing pressure. They were now drifting into the most dangerous part of the Weddell Sea where the pressure was exceptionally severe. Photographs of the *Endurance* at this period present curious positions; one shows her heeled over as if she were just going to lie on her side; in another taken a short distance off at another stage the masts can be seen just sticking above a mass of ice blocks.

A leader looks ahead, and Shackleton was taking no chances. He made all the necessary arrangements for leaving the ship in a sudden emergency; every man knew what he would have to do. Stores were overhauled and got ready. Still he hoped that the pressure would slacken.

On 24 October came the first sign of the end. Pressure of unusual strength began to be felt from three directions at once. Shackleton reports that "the ship was twisted and actually bent by the stresses. She began to leak dangerously at once." The men worked at the pumps, but these were constantly blocked by

new-formed ice, so it was not easy to master the water.

Three days later they had to give up any hope of saving the ship. Here is her captain's description. "The attack of the ice reached its climax at 4 p.m. The ship was hove stern up by the pressure, and the driving floe, moving laterally across the stern, split the rudder and tore out the rudder-post and stern-post. The decks were breaking upwards, and the water was pouring in below."

One of the crew tells of the last scene. "Nov. 21. This evening, as we were lying in our tents, we heard the Boss call out, 'She's going, boys!' We were out in a second and up on the look-out station and other points of vantage, and, sure enough, there was our poor ship a mile and a half away struggling in her death agony. She went down bows first, her stern raised in the air. She then gave one quick dive and the ice closed over her for ever. I doubt if there was not one amongst us who did not feel some personal emotion when the Boss said, sadly and quietly, 'She's gone, boys'."

A glance at the map will show how desperate their position was at that time. The nearest inhabited settlement was at least a thousand miles away. There was land to the west of them, Graham Land, with a number of islands off it, but they would be little better off there than on the ice. Shackleton decided, however, to sledge westwards in the hope of getting on to firm ground. The ice they were on was always breaking up, and there was the constant anxiety of what might

happen if a crack opened on the floe on which they pitched their first camp; Ocean Camp they called it.

They had soon to give up the idea of sledging. The broken nature of the surface, and the frequent cracking of the floes, made progress impossible. So reluctantly they pitched Patience Camp, to wait until the drift should bring them to open water. With all the ingenuity of sailors they made themselves as comfortable as possible in their new home. They added to their restricted rations by killing some seals and penguins, but the food had to be carefully husbanded as the future was so uncertain.

As they neared the open sea, so the ice became more broken, and the risks greater. Watch had to be kept day and night to give warning of any sudden cracks, and on one occasion one opened between two of the tents. At the beginning of April they were camped on a triangular floe with sides measuring 90 by 100 by 120 yards. The channels of water were not wide enough or sufficiently free of ice blocks to let them launch their three boats until 9 April 1915.

The voyage was full of danger; they had to steer a way between floes and submerged ice, and often they could not see far ahead as cliffs of ice cut them off. At night they camped on the biggest floe they could find; but they seldom had a night of complete rest. On one occasion, for instance, the floe cracked right across, cutting off Shackleton's tent from the rest of the camp, but quick action saved him. But by 12 April they were in clear water, and they set their course for Elephant Island. Three days later they

landed on that inhospitable shore; the first men to do so. Their sensations are well described by Shackleton.

"Some of the men were reeling about the beach as if they had found an unlimited supply of alcoholic liquor. They were laughing uproarously, picking up stones and letting handfuls of pebbles trickle between their fingers like misers gloating over hoarded gold. The smiles and laughter, which caused cracked lips to bleed afresh, and the gleeful exclamations at the sight of two live seals on the beach made me think for a moment of that glittering hour of childhood when the door is open at last and the Christmas-tree in all its wonder bursts upon the vision."

They were on firm land, and could sleep undisturbed, but they were still many hundreds of miles from men, and their only means of navigation was three small boats.

The weather was bad. That season of the year is almost the worst south of Cape Horn, and their bleak island offered little good shelter; the beach was the only place for camp as precipitous cliffs rose high above them. So they made the most sheltered camp they could, and discussed the next step.

They could expect no relief, for no one would dream of looking for them on Elephant Island. They would have to look for help themselves. The nearest port was in the Falkland Islands, a distance of 540 miles, but it would have been a hopeless task to get there by boat, as it would have to beat up against the prevailing north-westerly wind all the way. The only alternative

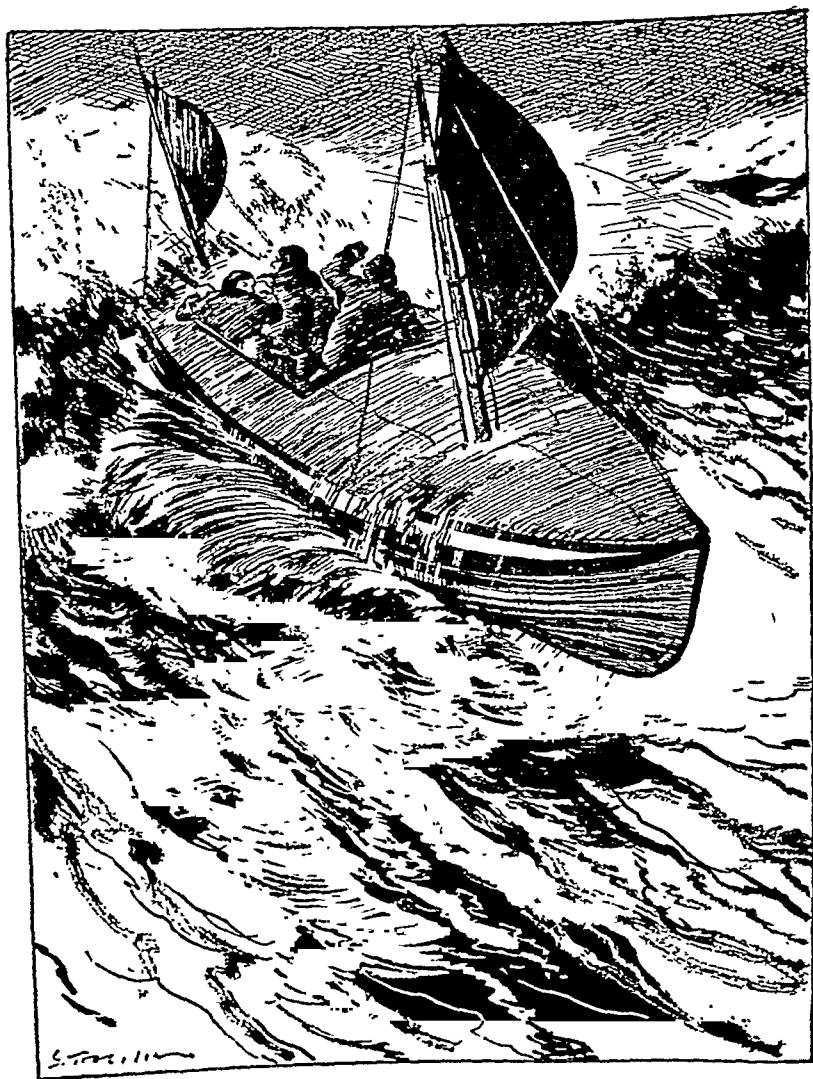
was South Georgia, 800 miles away, but in the area of the west winds, and so easier to reach.

They decided to make the attempt in the *James Caird*, the largest of their three boats. Shackleton picked on five men to go with him. A decking was improvised with sailcloth to give some shelter. Stores were selected to keep six men alive for one month. Every possible care was taken to make the boat as seaworthy as possible, but no one knew better than Shackleton that they were setting out on a dangerous adventure.

The *James Caird* was launched on 24 April 1916, and the little crew of six were watched by the band of men on the beach as they got under sail.

"The tale of the next sixteen days is one of supreme strife amid heaving waters." So wrote Shackleton when he was able to look back on that amazing voyage. A few sentences from his account will give some idea of what they endured.

"Cramped in our narrow quarters and continually wet by the spray, we suffered severely from cold throughout the journey. We fought the seas and the winds and at the same time had a daily struggle to keep ourselves alive. At times we were in dire peril. Generally we were upheld by the knowledge that we were making progress towards the land where we would be, but there were days and nights when we lay hove to, drifting across the storm-whitened seas. So small was our boat and so great were the seas that often our sail flapped idly in the calm between the crests of two waves. Then we would climb the next slope and catch the full fury of the gale where the



"We felt our boat lifted and flung forward like a cork."

carry them. We met an old man, who started as if he had seen the Devil himself and gave us no time to ask any question. He hurried away. Then we came to the wharf, where the man in charge stuck to his station. I asked him if the manager was in the house.

'Yes', he said as he stared at us.

'We would like to see him', said I.

'Who are you?' he asked.

'We have lost our ship and come over the island', I replied.

'You have come over the island?' he said in a tone of entire disbelief. The man went towards the manager's house and we followed him."

Needless to say, once the first surprise was over, all at the whaling station gave the returned explorers a wonderful reception. A ship was sent round to fetch off the three men and the *James Caird*.

Shackleton's thoughts were hardly ever off the party on Elephant Island, and he set to work energetically to find means of rescuing them. How he did that, after many setbacks, and how they had fared meantime, you must read for yourself in his own book, *South*. What has been told here will suffice to show that another great record of heroism had been added to the world's story.

they felt that their boat would scarcely stand the strain even if they had a rudder.

Two of the men were clearly so weak that they could not possibly face the climb, so they had to be left behind with a third to look after them. They beached the boat, and by turning her over, made a good shelter.

On 19 May the other three set off. They knew that the interior of the island was mountainous, but they had no conception of what lay before them. Had they been in full strength the task would have been considerable, but in their weakened condition they achieved a remarkable journey. No one had ever crossed before so they had to find the route as they went, and several times they had to retrace their steps as they came up against obstacles which they could not surmount. They crossed glaciers, climbed mountain ridges, staggered through deep snow, and finally had to get down a waterfall by means of a rope. Then at long last they came in sight of the whaling station. What happened is worth telling in Shackleton's own words.

"Our beards were long and our hair was matted. We were unwashed and the garments that we had worn for nearly a year without a change were tattered and stained. Three more unpleasant-looking ruffians could hardly have been imagined. Down we hurried, and when quite close to the station we met two small boys. I asked these lads where the manager's house was situated. They did not answer. They gave us one look, then they ran from us as fast as their legs would

carry them. We met an old man, who started as if he had seen the Devil himself and gave us no time to ask any question. He hurried away. Then we came to the wharf, where the man in charge stuck to his station. I asked him if the manager was in the house.

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